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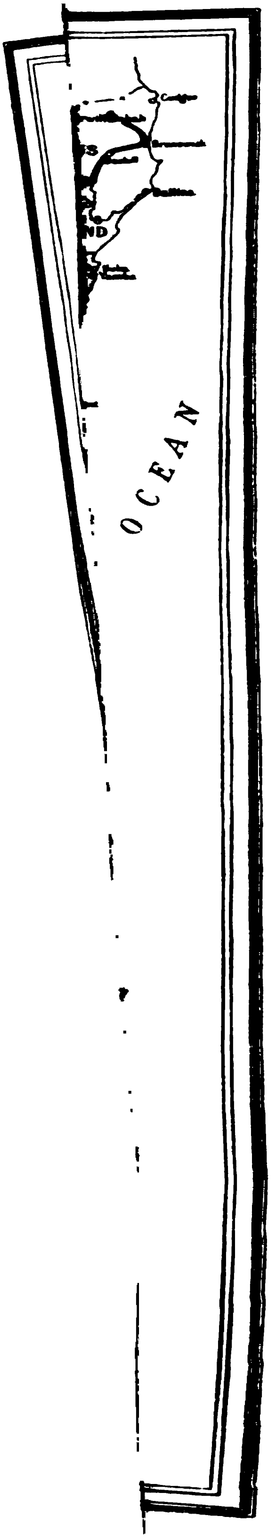
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SECOND ISSUE

THE
OFFICIAL YEAR BOOK
OF
NEW SOUTH WALES

1905-6

H. C. L. ANDERSON
(Director, Intelligence Department and Bureau of Statistics).

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PREFACE.

THE second issue of the Official Year Book contains the usual chapters dealing with matters of statistical interest, and there are in addition several articles on special subjects, which, it is hoped, will considerably enhance the value of the volume. The style in which this work was cast in the 1904–5 edition has been preserved for the present issue, mainly because, owing to the number of books and pamphlets which the Intelligence Department has recently put through the Press, the Editor of Official Publications has not yet had opportunity of bringing it more into line with what are felt to be the modern requirements in relation to works of this class. It is felt that the Year Book may with advantage be stripped of a good deal of historical matter which has year after year found a place in the publications of the State, that it has grown unwieldy through yearly accretions, and that attention might, with profit, be more particularly directed to the actual happenings, industrial, commercial, and social, of the period—the year immediately past—which the book ostensibly reviews. Such a publication, kept within a handy and reasonable size, replete with all current facts of importance concerning the State's operations, issued gratis in considerable numbers both at home and abroad, will, it is believed, prove a most valuable factor in disseminating information about New South Wales, besides filling a legitimate place as an up-to-date statistical annual.

The Official Year Book in its existing state contains a vast quantity of interesting matter relating to the early periods of the various industries as well as to the recent developments. It is not considered necessary or advisable to repeat this matter annually, though some arrangement may be made for its re-publication at more infrequent periods, and it is hoped that the

Official Year Book for 1907 will be presented to the public in the new and improved form indicated above. In the statistical chapters of the present volume the figures refer in most cases either to the calendar year, 1905, or to the financial year ended June, 1906; in some cases, however, it has been found possible to insert information relating to the year ended 31st December, 1906.

Acknowledgment is made at the head of the chapters to the authors of all articles not written by officers of the Department. The considerable work entailed in revising and rearranging the remaining chapters has been ably performed by Messrs. W. H. Hall, F.S.S. (Chief Assistant), H. A. Smith, F.S.S., S. M. Cook, R. M. Mitchell, J. J. Kelly, and T. Waites, of the Bureau of Statistics.

H. C. L. ANDERSON,
Director.

August, 1907.

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THE DISCOVERY OF "TERRA AUSTRALIS."

The existence of "a great southern continent" was the subject of much speculation from very early times. Far back in the ages there was a tradition current in India and China of a vast island, to which birds of passage migrated, and off the coasts of which the Malay Islanders were accustomed to catch strange fishes and monsters of the deep; and these tales in course of time found their way to Europe, being disseminated doubtless, in the first instance, by Greek soldiers who had accompanied the expedition of Alexander the Great to India. Allusions to this "Terra Australis" are also found in Strabo (B.C. 50), Pliny (A.D. 77), and Ptolemy (A.D. 150). Even supposing the modern theories relating to the Icelandic or Viking discovery of America were correct, Australia was thus known to the civilised world at an earlier date than the great western continent. The question as to who were the first white men actually to set foot on Australian shores is at present enshrouded in mystery, but it seems fairly clear that by the year 1540 both the Spaniards and the Portuguese had reached the coasts of the mainland and New Guinea, the former from the east, and the latter from the west.

According to Collingridge, the first appearance of something less problematical than the "Terra Australis" of the ancients is an outline of the western coasts of the Australian continent on a British Museum *mappemundi* of 1498, while it is also noted that there is a wooden globe in Paris on which there is an inscription to the effect that "Terra Australis" was discovered in 1499. The latter statement, however, lacks positive confirmation. Martin Behaim's globe of 1492 has a rough delineation of what may be taken to represent the western coast from the vicinity of Dampier's Archipelago to Cape Leeuwin.

The French claims to discovery from the alleged voyage of De Gonneville to the western coast in 1503 may be said to possess no more authenticity than those put forward by the Portuguese on account of the supposed voyage of De Eredia to the same locality in 1601.

The most important document hitherto come to light connected with the early discovery of Australia is known as the Dauphin Map (assigned date, 1530-6), its prototype being a planisphere of much earlier date. If it can be proved from the internal evidence of these old charts that they come from Portuguese or Spanish originals, then these nations will undoubtedly be entitled to claim the honor of having first discovered Australia.

In 1595 the Spaniards sent out an expedition from Callao under the command of Mendana, with the idea of founding a colony on the Australian continent. De Quiros was captain and chief pilot, and several of the explorers were accompanied by their families. The expedition, however, had a disastrous ending, and on the death of Mendana the remainder of the party went to the Philippine Islands, and thence to New Spain, in 1596. Wytfliet's work, published in 1597 (English translation), says, "Australis Terra is the most southern of all lands, and, if thoroughly explored, would be regarded as a fifth part of the world." With reference to this statement, however, Collingridge remarks that it cannot be taken as referring to Dutch voyages, and was very probably stolen from a Portuguese or Spanish source.

In 1605 De Quiros again set sail from Peru, with the object of founding a settlement on Santa Cruz, and also searching for the "deep and spacious, populous and fertile continent towards the South." This fancied continent was, of course, proved by Torres to be one of the islands in the New Hebrides. In connection with this expedition it is interesting to note that Torres did not by mere chance pass through the strait which now bears his name, as its existence was known to the Spaniards previously; it figures on Wytfliet's map dedicated to the King of Spain.

In 1602 the Dutch established their East India Company, and from their possessions in the East numerous voyages of discovery were made. It is a somewhat difficult task to obtain more than the most meagre details of the various expeditions, as the authorities were fearful lest other nations should reap the benefits of their enterprise; nevertheless, they laid down a chart of Australia on the pavement of the Stadthaus, at Amsterdam, for the information of their own merchants and statesmen.

In 1605, the "Duyfhen" was despatched from Batavia to explore the islands in the vicinity of New Guinea, and sailed along the west coast of what was supposed to be that island, but in reality was portion of the Gulf of Carpentaria. The land was found to be mostly desert, inhabited by "wild, cruel, black savages," who forced the explorers to turn round at Cape Keer Weer and sail for home. Thus, without being aware of it, the commander of the "Duyfhen" made the first authenticated discovery of any part of the great South Land, in about the month of March, 1606. Collingridge gives the name of the commander as Captain Guillaume Yansz.

Various portions of the western coast of the continent were visited between the years 1616-22 by the "Eendracht," "Mauritius," "Amsterdam," "Dordrecht," and "Leeuwin." The French exploring vessel "Naturaliste," in 1801, found a plate with an inscription on it referring to Hartog's visit in 1616. Just here it may be remarked that it is perhaps not generally known that in 1624 a petition for the "privilege of erecting colonies" in Terra Australis was presented by a certain Sir William Courteen to King James.

Portion of the south coast appears for the first time on old Dutch charts, referring to the year 1627 or thereabouts, when Pieter Nuijts, in the "Gulde Zeepaert," visited this portion of the continent. Other historians, however, maintain that the captain's name was Franchois Thysz, and that Nuijts was a member of the Dutch East Indian Council of Seventeen.

The voyage of Pelsart is of considerable importance, as he gave a fairly accurate description of portions of the west coast. Setting out from Texel in 1628, he reached the vicinity of the Houtman's Abrolhos in 1629, where he had the misfortune to be shipwrecked, but the greater portion of the ship's company was landed in safety on the adjacent islands. Pelsart determined to take one of the ship's boats and sail to Batavia in order to seek for assistance, and in the course of his voyage he touched at various places on the coast in search of water. He described the country as barren and inhospitable, and laid particular stress on the wretchedness of the native inhabitants. It is curious to note that his journal contains what is probably the first notice of the kangaroo by any white explorer. Pelsart successfully navigated his boat to Batavia, and returned with a relief vessel to take off the ship's company. When he reached Western Australia, he found that, under the leadership of the supercargo, some of the survivors had murdered 125 of the men, women and children left on the island, and plotted to kill Pelsart and sail away with the vessel on a piratical cruise. The ringleaders were, however, captured and executed, while the remnant of the expedition returned to Batavia. The Dutch made no secret of this disastrous failure, being persuaded that the news of their evil fortune would effectually deter any other nation from seeking to gain possession of the country.

Tasman sailed from Batavia on the 15th August, 1642, and it appears that one of the objects which prompted Van Diemen to despatch the expedition was the circumnavigation of New Holland, as the Dutch, in anticipation of its possession, had named the continent. After reaching the Mauritius, Tasman sailed south to about the 54th parallel, and thence steering eastward reached Tasmania, or, as he named it, "Van Diemen's Land." After a short stay here he sailed across and discovered New Zealand, giving to it the name of "Staaten Land." From New Zealand he directed his course to New Guinea, and thence reached Ceram and Batavia. Tasman made a second voyage under the auspices of the East India Company, in 1644, with the object of discovering whether New Guinea and Van Diemen's Land were connected with the Terra Australis. The ships sailed into the Gulf of Carpentaria, but failed to find Torres Strait, and steering along the northern and north-western coasts of Australia, returned to Java.

With the decline of Dutch naval power, owing to England's supremacy on the sea, their interest in Australia seems to have evaporated, the only occasions on which they touched there being when vessels were driven out of their course by contrary winds.

It was reserved for an Englishman, William Dampier, to make the first accurate reports in connection with the "Terra Australis," and even he only skirted portion of the western fringe of the continent. Dampier first touched at the shore, in about lat. 16 deg. 50 min., on the 4th January, 1688. He remarked that "New Holland is a vast tract of land; but whether an isle or a continent is unknown hitherto. This much I am sure of, however: that it neither joins to Asia, Africa, or America hereabouts." He speaks of the country as poor and waterless, while the inhabitants are described as the most miserable wretches in the universe, who, setting aside their human shape, were little better than the brutes.

On his return to England he published an account of his travels, which attracted so much attention that he was entrusted with the command of a ship of war, named the "Roebuck," in order to continue his discoveries. He reached the western coast, at Shark Bay, in 1699, and on this occasion it was spring-time when he landed, and he refers with great enthusiasm to the beautiful sweet-scented flowering trees and shrubs, and the abundance of wild fowl. Dampier explored the coast for a distance of about 900 miles—from Shark Bay to Dampier's Archipelago, and thence to Roebuck Bay.

In the interval between Dampier's two voyages, Wilhem de Vlamingh visited the South Land to search for the wreck of the "Ridderschap von Hollandt," lost between the Cape of Good Hope and Batavia in 1685. Vlamingh landed on the coast of Western Australia in 1696, and in the course of his investigations sailed some distance up the Swan River, and noted the flocks of black swans at various points in the stream. The meagre account of his voyage also shows that he touched at other places on the west coast of the continent.

For a period of about seventy years after Dampier's second visit there was a lull in exploratory activity, so far as Australia was concerned. Nevertheless, the reports of the various navigators who had visited this portion of the globe were the subject of keen discussion amongst scientific men. Much speculation was indulged in as to whether the known coast-line formed portion of a chain of islands, and whether New Zealand and Van Diemen's Land were only prolongations of a great Antarctic continent, or were joined on to the vaguely-known New Holland. The solution to these questions was afforded by the celebrated voyages of Captain James Cook. Cook sailed from Plymouth, in the "Endeavour," on the 26th August, 1768, and reached the island of Otaheite, in the Pacific, in April of the following year. Here the transit of Venus was successfully observed by the scientific party which accompanied the expedition, and then Cook struck out for the coasts of New Zealand, sighting land in the vicinity of Poverty Bay on the 6th October, 1769. Cook circumnavigated both North and South Islands, thus proving that they had no connection with the "Terra Australis," nor with the supposed Antarctic continent. Like Tasman, he found the natives bold and aggressive; but he was generally successful in procuring adequate supplies of firewood and fresh water. From New Zealand, whence he departed on the 1st April, 1770, Cook intended to proceed to Tasmania; but when not far from the island, the "Endeavour" was driven by contrary winds to the northward, and on the 19th April, 1770, land was sighted at Point Hicks—so named after the lieutenant who first discovered it. A little to the eastward another headland received the name of Ram Head, both of these points being situated in what is now known as Gippsland, in Victoria. Proceeding eastward, where the coast had a northerly trend, he discovered and named Cape Howe; and thence sailing along the eastern shore of what is now New South Wales, and naming various headlands on the way, he entered the inlet of Botany Bay (which he at first called Stingray) on the 28th April.

Cook was greatly surprised by the unconcern with which the natives treated the arrival of the expedition, for they either completely ignored the white strangers, or assumed a hostile attitude when any communication was attempted with them. Upon landing on Sunday, the 29th April, accompanied by Messrs. Banks and Solander, the blacks attacked the party with spears and boomerangs, and had to be dispersed by a discharge of small shot among them. The expedition remained at Botany Bay for a week, the natives proving intractable during the whole period. In the subsequent account of his voyages, which was published in England, Cook refers to "fine meadows," "abundance of grass," "deep black mould, fit for production of grain of any kind," &c., as characterising the country round the bay. How erroneous this description was, the early settlers found out to their cost, as will appear from a later chapter.

On the 1st May the expedition had the melancholy experience of attending at the funeral of a seaman named Forby Sutherland, who died of consumption, and who was probably the first British subject buried on Australian soil.

On leaving Botany Bay, Cook sailed northwards, passing the heads of Port Jackson, which he simply noted as apparently possessing good anchorage, and naming various capes and inlets on the coast of what is now New South Wales. Port Jackson is by many erroneously supposed to have been named after a seaman on the "Endeavour." The name was in reality given to it by Cook in compliment to his friend Sir George Jackson. Off the present Queensland coast, near Trinity Bay, the expedition narrowly escaped a disastrous ending, through the "Endeavour" striking a coral reef. The guns and all heavy gear that could be spared were thrown overboard, and after being fast on the reef for about twenty-four hours the little vessel floated off, and was taken to a sandy beach near the mouth of the Endeavour River, where she was careened. Here it was ascertained that, in spite of all their efforts, the vessel must inevitably have foundered, had not a piece of coral broken off and remained firmly embedded in the rent in the hull. The necessary repairs took about two months, and then, with infinite caution, Cook threaded his way through the numerous islands, reefs, and shoals off the coast until he reached Cape York. Here the great navigator landed on a small island called Possession Island, and although he had already hoisted the British flag at several other parts, he went through the ceremony of taking formal possession of the whole eastern coast from latitude 38 degrees to latitude 10½ degrees in right of His Majesty King George III, under the name of New South Wales.

A brief allusion to the discoveries which followed the foundation of settlement in the country will be found in the Historical Sketch of New South Wales.

PHYSICAL CONFIGURATION.

The State of New South Wales lies almost entirely between the 29th and 37th parallels of south latitude, and between the 141st and 154th meridians of east longitude. On the north it is bounded by Queensland, on the south by Victoria, on the east by the South Pacific Ocean, and on the west by South Australia. From Point Danger on the north to Cape Howe on the south, the length of the State is about 680 miles, and its breadth east and west along the 29th parallel measures 760 miles. A diagonal line from the south-west corner to Point Danger would cover 850 miles. The State comprises within its limits an area of 310,700 square miles, equal to 198,848,000 acres, or over two and a half times the extent of Great Britain and Ireland.

The vast cordillera of the Great Dividing Range, extending northward into Queensland, and penetrating southward into Victoria, divides the State into three well-defined zones, differing from each other in climate, soil, and other physical characteristics. There is first the coastal district, a narrow strip of territory between the mountains and the ocean; then there is the table-land region intersected by the Dividing Range and its various spurs; and, lastly, the great plain region of the western district.

THE COASTAL DISTRICT.

The coastal district has an average width of about 35 miles, the widest portion being in the Hunter-Goulburn Valley, where it spreads out for a distance of 150 miles; while at Clifton, in the South Coast district, the table-land abuts on the ocean, from which, however, it recedes gradually as it extends southwards. The shore line measures about 750 miles, and embraces in its extent some of the finest natural harbours in the world. There are also numerous other ports which are used as havens of shelter in adverse weather, but fortunately they are seldom needed, as the coast is singularly free from violent storms. The most important inlet is, of course, Port Jackson, on the shores of which the capital is built, and which ranks among the finest harbours in the world. The entrance is between two bold headlands 74 chains apart, named, respectively, North and South Head. With its subsidiary arms, the harbour covers an area of upwards of 15 square miles, and has a coast-line of nearly 200 miles, the greater part of which has deep water right up to the shore. At the Circular Quay, vessels of 12,000 tons and over berth at the very edges of the main streets.

The most noteworthy inlets on the coast north from Sydney are as follows:—Byron Bay, protected by the cape of the same name, offers safe shelter to vessels trading to Queensland. The port possesses facilities for disposing of the agricultural and dairy produce of the rich Brunswick and Tweed River districts. Shoal Bay is the estuary of the Clarence River, and affords good anchorage, although the size of vessels entering the harbour is restricted owing to the presence of a shifting sand-bar. Works are, however, in progress which will remove this disability and render the port one of the safest on the coast. Port Macquarie is the estuary of the Hastings River, and is much used by coasting craft as a haven of shelter during contrary winds. The entrance to Port Hunter, the estuary of the River Hunter, formerly required very skilful negotiation by mariners, but the construction of a breakwater to the outlying island of Nobby's, and the various other harbour works undertaken by the Government have resulted in the formation of a safe and commodious haven. The latest scientific appliances have been provided for the quick handling of coal, the port being the outlet for the production of the great northern coal-fields. Broken Bay, 15 miles to the north of Sydney, forms the mouth of the Hawkesbury River, and is one of the most picturesque inlets in Australia. The bay is divided into three branches, named, respectively, Brisbane Water, Hawkesbury Mouth, and Pittwater. Brisbane Water opens out into a series of lake-like expanses, the town of Gosford, situated at the head of the Broadwater, being the centre of a rich timber-producing district.

The first inlet of any importance southward from Sydney is Botany Bay, famous as being the site of the initial attempt at settlement in Australia. The inlet covers an area of 24 square miles, but it is shallow, and little used, except as a haven for coasting craft. Wollongong and Kiama Harbours are artificially constructed ports, the former being the chief shipping outlet for the production from the Illawarra Collieries. Eighty miles south of Sydney lies the fine inlet called Jervis Bay. Its entrance is about 2 miles in width, and deep water and good anchorage may be found in almost any portion of it. The bay is the centre of an extensive fishing industry, but a large area of the country surrounding it is as yet in an undeveloped state. Bateman's Bay is situated at the mouth of the Clyde River, and is the outlet for a fair amount of agricultural and dairy produce from the surrounding district. Twofold Bay is a noble harbour near the southern limit of the State. The port maintains a considerable trade in produce and live stock with the neighbouring States, and was formerly the seat of a lucrative whaling industry.

In addition to the inlets enumerated above, there are at various intervals along the coast numerous lake-like expanses, partly marine and partly estuarine, the majority of which are shallow, and teeming with fish. The most important of these are as follows :—

Wallis Lake, situated near Cape Hawke, receives the drainage of the Wollomba River, near the mouth of which the town of Forster is situated. Myall Lake is a beautiful expanse lying between Cape Hawke and Port Stephens. Lake Macquarie, near Newcastle, has an area of 44 square miles, and is the seat of a flourishing fishing industry. Several coal-mines are worked along its shores. Southward from Sydney, and between Wollongong and Kiama, lies lake Illawarra, from which large quantities of fish are sent to the Sydney market. Further south there are about eight other of these so-called lakes, but none of them is of sufficient importance to warrant special mention.

The islands off the coast of New South Wales are small and unimportant, consisting mainly of barren rocks at no great distance from the shore, with which in times past they were in all probability connected. Lord Howe Island, 360 miles off the coast opposite Port Macquarie, is also politically attached to the State. The island, which is about 5 square miles in area, is in most places very fertile. Mt. Gower, a peak in one of its volcanic ridges, reaches a height of 2,840 feet. The Governor of New South Wales, by virtue of his office, is also administrator of the affairs of Norfolk Island, situated about 1,200 miles north-east of Sydney. This island has an area of 8,528 acres, and possesses a good climate, with a very fertile soil, producing heavy crops of potatoes, onions, bananas, &c.

Owing to the proximity of the Dividing Range to the sea, the rivers in the Coastal District have in general short and rapid courses. In periods of heavy rainfall, they frequently inundate the surrounding country, but the rich deposit of alluvium left behind by the retreating flood-waters often more than compensates for the temporary damage. In fact, so rich is the soil on these eastern river flats, that the use of artificial manures is almost unknown. The Tweed and Brunswick are the two most northerly rivers in the State, the former being 30 miles in length, and the latter 35 miles. Both streams pass through fine agricultural land in which maize and sugar-cane thrive to perfection.

The Richmond enters the sea near Ballina, after a course of 120 miles, its basin comprising an area of 2,400 square miles. Rising in Mt. Lindsay, the upper portion of the course is through rugged pastoral country and heavily timbered slopes, but lower down towards the sea there are reaches of alluvial soil of great fertility, admirably adapted to the growth of sugar-cane and maize. There were formerly dense brushes along the banks of the river, containing splendid cedar, but the best of the timber has been removed. On the slopes of the ranges, however, there are magnificent forests of blackbutt and other valuable commercial timbers. The Richmond basin is well adapted for dairying, and the industry is making rapid strides in the district. The river is navigable on the main arm as far as Casino, 62 miles from the sea.

The Clarence is the largest river on the eastern coast, and has a length of 240 miles, with a drainage basin estimated at upwards of 8,000 square miles. The head waters of the stream are in very rugged country; some of its tributaries, such as the Mitchell, Nymboi, Timbarra, and Orara, actually flowing for portion of their courses in an opposite direction to the main river. For a distance of 70 miles from the sea the Lower Clarence is a magnificent stream, averaging half a mile in width. It is navigable as far as Copmanhurst, 67 miles from the entrance. The basin of the river is occupied by plantations of sugar-cane and maize, yielding heavy crops. In the Orara Valley there are extensive areas clothed with valuable timber trees. Gold is obtained in the Orara basin as well as on the Bucca and Nana Creeks.

The district drained by the Bellinger and Nambucca Rivers, two small streams, each about 40 miles in length, is rich in agriculture and timber resources, but the nature of the entrances is such that only small vessels trade there.

The Macleay, which has a length of 200 miles, enters the ocean at Trial Bay, after draining an expanse of country containing 4,800 square miles. The upper portion of the river consists of several branches, of which the principal are the Guyra, Chandler, and Apsley. Some of the wildest and most picturesque scenery in the State is found in the Apsley Valley, the stream at one time foaming through a narrow gorge whose precipitous sides rise to a height of over 2,000 feet, and at another, dashing down a rocky steep in a series of magnificent rapids and waterfalls. The lower portion of the Macleay basin consists of rich alluvial plains yielding fine crops of maize, oats, barley, and potatoes. Sugar-cane also thrives, but south of the Clarence the crop is liable to be spoiled by frosts.

The Hastings drains 1,400 square miles of rich, undulating, and densely wooded country. Port Macquarie, at its mouth, was once a centre of considerable trade, but the building of the Great Northern Railway caused a diversion of this traffic to Newcastle.

The Manning has a course of 100 miles, and its basin embraces an area of 3,000 square miles. The alluvial flats on the lower river constitute one of the chief maize-growing districts in the State. Dairy-farming is also increasing here, and there is a considerable output of butter. The river is navigable for coasting steamers as far as Wingham, 20 miles from the mouth.

The source of the Hunter is in the Mt. Royal Range, within a few miles of the head-waters of the Manning. Flowing in a south-west direction it meets the Goulburn, and then takes a turn eastward, reaching the sea at Newcastle, after a course of 200 miles. During its progress it receives the waters of numerous tributaries, the most important of these being the Wollombi, Paterson, and Williams, each of which drains a large extent of rich country. It has been computed that with its tributaries the Hunter basin covers 11,000 square miles, an area twice as large as that of the Thames. The river is navigable for ocean-going steamers as far as Morpeth, 35 miles from the sea, while smaller craft can proceed up the Paterson and Williams for distances of 20 miles. The Lower Hunter Valley is one of the most beautiful and productive districts in Australia. Heavy crops of lucerne, maize, potatoes, and fruits are obtained all along the main stream as well as in the basins of the tributaries, while from beyond Maitland to Newcastle the river passes through one of the most extensive coal-fields in the world.

The Hawkesbury enters the ocean at Broken Bay after an extremely tortuous course of 330 miles. Its drainage basin is estimated to cover 8,000 square miles. The river has received different names at various sections of its course. Thus it rises under the name of Wollondilly in the Cullarin Range, about 20 miles north-west of Goulburn. After receiving several small tributaries it flows through the beautiful Burragorang Valley, and on emerging is joined by the waters of Cox's River, which drains the southern portion of the Blue Mountains. The main stream is then called the Warragamba until its junction with the Nepean, which carries along the waters received from the Cataract, Cordeaux, and other feeders rising on the slopes of the Illawarra Range. Under the name of Nepean the river flows along the eastern foothills of the Blue Mountains, and receives the waters of the Grose and Colo. From its junction with the Grose the stream is known as the Hawkesbury. In its lower course the river opens out into a series of lake-like expanses, and round the shores of these, and for some distance higher up, the scenery is stated to rival that of the far-famed Rhine Valley. The Hawkesbury-Nepean Valley contains alluvial plains of surprising fertility, and the district, which is one of the oldest settled in the State, is famous for its crops of maize, lucerne, potatoes, sorghum, and fruits.

There are no rivers of any importance south of Sydney until the Shoalhaven is reached, the narrowness of the coastal strip being accountable therefor. The Shoalhaven River is 260 miles in length, and has a drainage basin 3,300 square miles in area. In its upper reaches the stream passes through wild and picturesque scenery, some of the gorges exceeding 1,000 feet in depth, but like most of the other coastal rivers, the lower valley is composed of rich alluvial plains, dotted with the homes of prosperous settlers. The district produces some of the finest maize crops in Australia, but the chief industry is dairy-farming. In the ravines on the Upper Shoalhaven a fair amount of gold is obtained. Large steamers ascend the river as far as Nowra Bridge, about 10 miles from the entrance, and in close proximity to the terminus of the railway line from Sydney.

Between the Shoalhaven and the southern boundary of the State there are several small rivers passing through rich country, much of which, however, is as yet in an undeveloped state. The principal of these are the Clyde, Tuross, Bega, and Towamba. A great deal of this country is eminently fitted for dairy-farming, and the industry has made considerable strides in the Bega district.

At various points along the coastal belt isolated mountain peaks stand out as prominent landmarks. The existence of these was remarked by Captain Cook, and several of them still preserve the names given to them by the great navigator. Near the head of the Tweed River, Mount Warning rises in solitary grandeur to a height of 3,840 feet. The peak, which was so named by Cook, is visible in clear weather for a distance of 60 miles. South of Shoal Bay, Mount Wohiman rises to the height of 1,200 feet. Mount Seaview stands about 40 miles inland, and 8 miles south of the Hastings Range. Its elevation is about 3,100 feet. The Brothers, so named by Captain Cook, are three conspicuous peaks, each over 1,500 feet in height, situated near Camden Haven. Coolangatta, 1,000 feet high, stands near the entrance to the Shoalhaven River. Dromedary, so named by Captain Cook, is a prominent landmark 4 miles inland to the south of the Tuross River. Its elevation is 2,706 feet. Imlay, 9 miles south-west of Twofold Bay, is 2,910 feet in height.

The coastal district is intersected by four mountain ranges. The North Coast Range, situated at an average distance of 35 miles from the sea, runs north and south from Mount Marsh in the Richmond Range down to the Hastings district. Its general elevation is about 2,000 feet. South of Sydney, the Illawarra Range rises sheer out of the ocean to a height of 1,000 feet at Clifton, and, receding inland, terminates near the north bank of the Shoalhaven. Its average distance from the sea is 5 miles. The highest peak is Mount Kembla (1,752 feet). The range is traversed by valuable coal seams, and these are profitably worked at Bulli, Clifton, Mount Kembla, Mount Keira, and Corrimal. Intrusive volcanic dykes have, in places, converted the coal into a natural coke of excellent quality. The Currockbilly Range runs from the south bank of the Shoalhaven River near Marulan, and terminates on the north bank of the Moruya at about 8 miles from the sea. Its highest peak is Budawang (3,630 feet). The peculiarly-formed Pigeon House (2,400 feet) is a conspicuous landmark, and was so named by Captain Cook. The South Coast Range, of which the highest peak in New South Wales is Coolangubra (3,712 feet), forms the eastern and southern boundaries of the Upper Snowy River basin.

THE TABLELAND DISTRICT.

The Tableland district is divided into two sections, a northern and a southern, the Hunter-Goulburn and Peel River Valleys, roughly speaking, marking the line of demarcation between them. Throughout their entire extent these plateaus are intersected by the Main Dividing Range and its lateral spurs. The district varies in width from 30 to 100 miles, and in past ages most probably consisted of a series of continuous uplands, which were later deeply scarred and eaten into by the erosive agency of running water. On the seaward side the tableland generally rises in an abrupt wall-like mass from the coastal plain. The summit consists of undulating country, diversified by mountain ridges and deep valleys. On the western side there is a gentle slope towards the Great Plain district of the interior.

The Dividing Range has received different names at various sections of its course. Thus in the northern tableland, the New England Range extends from near Tenterfield as far down as the parallel of Port Macquarie. This portion of the cordillera averages 3,500 feet in height, the loftiest peak being Ben Lomond, which reaches 5,000 feet. The Great Northern Railway, in its course along the tableland, passes close to the summit. The Liverpool Range is the next prolongation of the chain. It follows a westerly direction for about 150 miles, and terminates near Cassilis; the highest point is Oxley's Peak, which reaches 4,500 feet.

Near the town of Scone a spur from this range contains the celebrated burning peak, called Mount Wingen. The fires of this mountain are not, however, of volcanic origin, but are occasioned by the slow combustion of coal seams deep underground. The Liverpool Range forms the boundary between the Liverpool Plains and the Hunter-Goulburn Valley, and is part of the connecting link between the northern and southern tablelands.

The climate on the northern tableland is delightfully fresh and invigorating, and, although in summer the thermometer occasionally registers high temperatures, the evenings are generally cool and pleasant. Beautiful expanses of undulating country are to be found, and these are excellently adapted for sheep breeding, while large crops of wheat and other cereals are also grown. The tableland is, moreover, rich in mineral resources, gold, silver, tin, antimony, and other minerals being mined for at various localities.

Starting from the western extremity of the Liverpool Range, the Main Range, or Blue Mountain Range, as it is sometimes called, encircles the upper portion of the Hunter-Goulburn basin, and after running west and south, terminates near Taralga. Its average height is inconsiderable, the highest point being Mount Binda, 4,460 feet. The Great Western Railway crosses the range at Rydal. The next extension is known as the Cullarin Range, and runs from Lake Burra Burra to the southern extremity of Lake George, at an average elevation of 2,500 feet, its highest peak, Mount McAlister, reaching 3,390 feet. Near Goulburn the range is crossed by the Great Southern Railway. The Gourock Range extends from Lake George to the head of the Kybeyan River, and in portion of its course forms the edge of the southern tableland. The highest point is Tumanmang, 4,656 feet. Next comes the Monaro Range, which, after running southward for a time, takes a sharp turn west and north-west to the vicinity of Kiandra. The loftiest peak in this extension is the head of the Kybeyan River, which reaches 4,010 feet. The final section of the cordillera is called the Muniong Range, and this division stretches from the southern termination of the previous section to the southern boundary of the State, and into Victoria. In this range is found the highest peak in Australia, viz., Mount Kosciusko, which reaches an altitude of 7,300 feet, while there are in addition several other peaks each over 6,000 feet high.

The southern tableland has a less average elevation than the northern, despite the presence of Kosciusko and other lofty peaks in its southernmost extension. While a considerable portion of it is rugged, inhospitable country, there are, nevertheless, splendid expanses of undulating uplands, such as the Bathurst, Goulburn, Yass, and Monaro Plains, all of which are excellently adapted for sheep-farming and agriculture. An interesting feature of the tableland is the presence of several "sunken" valleys, noted for the beauty of their scenery. Amongst these are Burragorang Valley, through which the Wollondilly flows; Kangaroo Valley, between Moss Vale and the Shoalhaven; and the Araluen Valley, near Braidwood. On this tableland also are situated the wonderful Jenolan, Wombeyan, and Yarrangobilly Caves, the beautiful formations in which have been dissolved out of limestone secreted by the polyps of ancient Silurian atolls and coral reefs. The climate is generally mild and bracing, although at times there are heavy snowfalls in the high southern portion, and snow occasionally lingers on the topmost crests of the Muniong Range throughout the year.

In addition to the above-described sections of the great Cordillera, which either traverse the tableland or run along its margin, numerous spurs or laterals are thrown out on each side. On the eastern side there is first the Macpherson Range, which pursues an irregular course from near Tenterfield to Point Danger, and separates the basins of the Tweed and Richmond in New South Wales from that of the Logan River in Queensland. Its highest elevation is reached in Mount Lindsay (4,064 feet), a picturesque peak, whose bare, rock-bound summit is visible for many miles around. Then there is the Richmond Range, separating the basins of the Richmond and Clarence Rivers. Next comes the Macleay Range, forming the watershed between the Clarence and Macleay, and reaching its highest point in Chandler's Peak (5,130 feet). The Hastings Range lies between the Macleay and Hastings basins. Then comes the Mount Royal Range, which branches off in a south-easterly direction from the Liverpool Range, and attains its greatest elevation in Mount Royal, or Cobrabald (3,000 feet). The Hunter Range forms part of the southern boundary of the Hunter Valley, its most prominent peaks being Corricudgy and Warrawalong, each about 3,000 feet high. The Blue Mountains constitute a plateau-like mass in the county of Cook, the highest peaks therein being Mount Clarence (4,000 feet), and Mount Victoria (3,525 feet). Portion of the Mittagong Range traverses the southern tableland, and, near Robertson, joins with the Illawarra Range.

The chief spurs on the west of the Dividing Range are as appended:—The Nandewar Range breaks off from the New England Range about 12 miles south of Uralla, and terminates about 10 miles from the banks of the Gwydir. Its highest peak is Mount Lindsay (3,000 feet). Traces of past volcanic activity are found at intervals along this range. The Moonbi Range leaves the New England section of the main mountain mass near the source of the Macdonald River, and runs to within 22 miles of Manilla, reaching its topmost elevation in The Summit (3,600 feet). The Currabubula Range branches off from the Liverpool Range, and pursues a north-westerly direction to a point on the Peel River about half-way between Tamworth and Gunnedah. The highest peak, Mount Turi, has an altitude of about 3,000 feet. From the Liverpool Range a north-westerly offshoot runs out to the vicinity of Coonabarabran, and is known as the Warrumbungle Range. Its greatest elevation is reached in Mount Exmouth (3,000 feet). Abundant evidences of past volcanic activity are met with at intervals in the course of the range. The Macquarie Range strikes off from the Main Range near Shooter's Hill, and extends to the junction of the Cudgegong and Macquarie Rivers. Its highest point is the Canoblas (4,610 feet), a group of volcanic peaks in the vicinity of Orange. It was near the junction of Summer Hill and Lewis Ponds Creeks, which have their sources in the Macquarie Range, that Hargraves made his famous gold discoveries in 1851. The Mundoonan Range branches off from the Cullarin section of the cordillera a little to the north of Lake George, and terminates near Cootamundra, another branch turning southward to near Gundagai. Its topmost peak is Mundoonan (2,674 feet). Three spurs are given off to the westward from the Muniong Range. First there is the Murrumbidgee Range, separating the basins of the Goodradigbee and Upper Murrumbidgee Rivers. Several of its peaks approach 7,000 feet in height. Next comes the Tumut Range, separating the Goodradigbee from the Tumut River, and this is followed by the Murray Range, which divides the upper courses of the Tumut and Murray Rivers, and reaches its culminating point in Mount Dargal (5,490 feet).

The only true lakes of any consequence in New South Wales are found on the southern tableland, the principal being Lake George and Lake Bathurst. The former occupies a depression in the Cullarin Range, known as Lake George Basin, and has an area of 40 square miles, with a length of about 16 miles, and a breadth, in its widest part, of 6 miles. It must be understood, however, that these dimensions vary with the seasons, and, as a matter of fact, between the years 1846 and 1850 the lake is said to have been quite dry. Although it receives the drainage of several small streams, its waters, which are quite brackish, have no visible outlet. Lake Bathurst lies 10 miles to the eastward of Lake George, and in good seasons has an area of 15 square miles. Both lakes are situated in a rich, productive district, and the scenery, especially in the Lake George Basin, is of remarkable beauty.

THE WESTERN DISTRICT.

The Western District occupies by far the largest area in New South Wales, extending as it does from the foot of the tableland right across to the boundary of the State. Practically the whole of this immense tract of country consists of a vast plain, the continuity of which is broken only in the extreme west by the insignificant Grey and Barrier Ranges. Between Orange and Cobar there is a low ridge dividing portion of the Lachlan tributaries from the Darling, and this elevation is considered by geologists to be the skeleton remnant of a great range which once stretched right across to the border. As pointed out previously, there is by no means a bold line of demarcation between the tableland and the Western District, the highlands, generally speaking, merging with the plain by a long gentle slope. Various portions of this region have received distinctive names. Thus, the Liverpool Plains comprise an extensive tract of good pastoral country lying between the Currabubula and Liverpool Ranges, discovered in 1825 by Allan Cunningham. Old Man Plain is situated between Hay and Deniliquin, and The Bland between Cootamundra and Lake Cowal. Barrabool Plain is on the Lower Namoi, and the Baronne Plains are on the Castlereagh, near Coonamble. The name Riverina is applied to a beautiful expanse of pastoral and agricultural country, intersected by quite a network of streams, bounded on the north by the Lachlan River almost up to Euabalong, on the south by the Murray from the Lachlan junction up to Albury, while the eastern boundary is, roughly speaking, the Sydney road.

A glance at the map would lead to the impression that this great western plain region was provided with a splendid natural water supply in the shape of numerous rivers and tributary streams. A nearer acquaintance with the physical conditions of the district will, however, tend in some degree to modify this view. The upper courses of the great rivers are for the most part shallow, and in very dry weather consist merely of a chain of deep pools, the intervening portions being quite dry. Moreover, many of the tributaries in times of drought fail to reach the main stream, and sink their scanty contents into the soil. Another peculiarity of some of the western rivers consists in the fact that occasionally the banks of the stream are actually higher than the surrounding country. In very rainy seasons, therefore, when the shallow channels refuse the impossible task of carrying the united drainage of tributaries, many of which bring down water from far-distant Queensland, the whole country for miles around is inundated, and becomes an inland sea. The foregoing, however, represents extremes of conditions in the west. In ordinary seasons the rivers creep slowly along through grass-covered plains, on which millions of sheep are depastured, while here and there the fertile alluvial soil yields rich crops of wheat and other produce. In addition to the natural grasses, several indigenous shrubs and trees afford sustenance to the pastoralists' flocks, the most important of these being the well-known salt-bush.

It is easy now to understand the conflicting reports brought back to Sydney by the early explorers in this region, for the aspect of the country is entirely governed by the seasons.

All the rivers of the Western District really belong to one system—that of the Murray-Darling. The upper portion of the Murray River is composed of three branches—the Indi, Hume, and Tooma. The Indi, which is generally regarded as the source of the main river, rises near the Pilot Mountain, at an elevation of 5,000 feet above sea-level, the other two branches originating in the slopes of Mount Kosciusko. Descending towards Albury, the river receives the drainage of numerous other mountain streams, and, pursuing a westerly course along the southern boundary of the State, receives the waters of the Murrumbidgee and Darling on its right bank, prior to passing into South Australia, where it discharges into Lake Alexandrina. The total length of the Murray is about 1,720 miles, of which 1,250 are in New South Wales; the total navigable length being about 1,590 miles. As in the case of nearly all the western rivers, numerous ana-branches, or "billabongs," are found along its course, the principal being the Edward, which has a length of 150 miles. As before stated, the Murray passes through some of the finest pastoral country in Australia, while in the immediate vicinity of the river there are forests of red gum and other valuable timber trees, the quality of which is being considerably improved by judicious forest-thinning.

The Darling drains a most extensive basin, some of its upper tributaries originating in the highlands of southern Queensland. The total length of the river is estimated at 3,282 miles, and in favourable seasons it is navigable for small steamers as far as Walgett, 2,345 miles from the sea. Its furthest-north tributary is the Condamine, which rises near Warwick, in Queensland, and, under the name of Culgoa, joins the main stream 20 miles above Bourke. The Dumaresq forms portion of the northern boundary of the State, and takes its rise in the Dividing Range not far from the head waters of the Clarence. Lower down it meets the Macintyre, from the New England District, and thenceforward the main branch is called the Macintyre, until it meets the Gwydir, after which it takes the name of the Barwon, the latter title being retained as far as the junction of the Bogan. The main river from this point down as far as the Murray is known as the Darling. From the Culgoa junction to the Murray the river does not receive a permanently flowing tributary, and the banks in some places present the curious feature, previously alluded to, of being higher than the surrounding country. Nearly all the plain country within the Darling basin is occupied by pastoralists, much of the wool produced being sent down by river steamers to Victoria and South Australia.

The Gwydir, which has a length of 445 miles, rises in the New England Range, and flows in a north-westerly direction to the Barwon, through good pastoral and agricultural country. The lower portion of its course gives off several large ana-branches, some of which stretch out into extensive swamps before again uniting with the parent stream. The Namoi rises in the Moonbi Range, and, after receiving various sectional names, joins the Barwon, near Walgett. Below Gunnedah it passes through some fine pastoral country, including the celebrated Liverpool Plains. The Castlereagh also joins the Barwon, after an extremely circuitous course of 365 miles from its source in the Warrumbungle Mountains. As far down as Coonamble the river possesses a fair volume in ordinary seasons, but beyond that town its bed diminishes, and in some years the stream does not flow as far as the Barwon. The Macquarie rises in the main range, near Shooter's Hill, and, after a course of about 750 miles, terminates in a swamp known as the Macquarie Marshes, near the Barwon. Much of the country drained by the head waters of this stream is auriferous, the Hill End, Tambaroora, Hargraves, and Gulgong goldfields being within its basin, but the lower river basin contains good agricultural and pastoral country. The Bogan rises in some low hills in the county of Kennedy, and, after a course of 450 miles, enters the Darling between the towns of Bourke and Brewarrina. The Bogan basin is devoted almost exclusively to sheep raising. The Lachlan is formed by the united waters of several small streams originating in the Cullarin Range, and, after a tortuous course of 700 miles, joins the Murrumbidgee, the country near their confluence being covered with the succession of swamps which so embarrassed Surveyor Oxley, in 1817. Good pastoral country is met with in the central and upper portions of the river's basin, but the lower basin is deficient in tributary streams, and generally unsuited for occupation.

The Murrumbidgee head waters have their sources in a northerly spur from the Kosciusko plateau, and the river, after receiving numerous tributaries, joins the Murray, its total course measuring 1,350 miles. In favourable seasons small steamers can proceed up stream as far as Gundagai. The upper course of the river is in extremely rugged country, much of which is auriferous, the Kiandra, Gulf, and Adelong gold-fields being situated in this region. Lower down, the river passes through the rich district of Riverina, where it sends off numerous billabongs or subsidiary channels, some of which extend for a considerable distance. The soil in this region is of surprising fertility, and is the home of a prosperous agricultural and pastoral population. Several lakes occur in various places along the courses of the great western rivers. The area of these, however, is indeterminate, as in dry weather their contents sometimes disappear, while in very wet seasons they occasionally cover an immense extent of country. Lakes Poopelloe and Gunyulka are situated on the left bank of the Darling, and Cawndilla, Menindie, and Laidley's Ponds on the right. Lakes Cowal and Cudjellico are within the Lachlan basin, and Lake Victoria, which is sometimes filled by the overflow from the Murray, is in the south-western corner of the State.

GEOLOGICAL FORMATION.

The geology of the State has been ably treated by various learned scientists, and this work has been added to by the late Mr. C. S. Wilkinson, Government Geologist, and by Mr. E. F. Pittman, his successor in that office. To the Rev. W. B. Clarke we are indebted for the first systematic classification of the various sedimentary formations found in New South Wales. The original classification, however, has been somewhat modified, and the rocks, as they are now known, are classified as follows:—

- *Cainozoic*..
  - Post Tertiary
    - Recent.
    - Pleistocene.
  - Tertiary ......
    - Pliocene.
    - Miocene.
    - Eocene.
- *Mesozoic* ...
  - Cretaceous ...
    - Upper Cretaceous—Desert Sandstone.
    - Middle Cretaceous—Auriferous Alluvial Leads at Mount Brown, Tibooburra, and The Peak, near Kayrunnera.
    - Lower Cretaceous—Rolling Downs Formation.
  - Jurassic.
  - Triassic—Hawkesbury Series
    - Wianamatta Shales.
    - Hawkesbury Sandstones.
    - Narrabeen Shales.
- *Palæozoic*..
  - Permo-Carboniferous
    - Upper Coal Measures.
    - Dempsey Beds.
    - Middle Coal Measures.
    - Upper Marine Series.
    - Lower Coal Measures.
    - Lower Marine Series.
  - Carboniferous.
  - Devonian.
  - Upper Silurian.
  - Lower Silurian.

PALÆOZOIC PERIOD.

Palæozoic rocks extend throughout almost the whole eastern portion of the States, principally on the western watershed of the Main Dividing Range, in the country where the Murrumbidgee, Lachlan, and Abercrombie Rivers rise. They appear on the eastern watershed, along part of the coast near Bateman's Bay, and, striking inland, are found in the basin of the Clyde, and the upper valley of the Shoalhaven. Slates containing Lower Silurian fossils (Graptolites) have been found at four localities in New South Wales—on the border of Victoria, to the south and south-west of Delegate; at Myall Reefs, near Tomingley; at the Junction Reefs, near Mandurama; and at Cadia, near Orange.

The *Upper Silurian* rocks extend as far north as Mudgee, where they are overlain by the Permo-Carboniferous strata of the Hunter Valley, and by the belt of volcanic rocks extending along the Liverpool Range. They reappear farther north, in the upper valley of the Macleay River, on the east slope, and in the basin of the Namoi, on the west of the Dividing Range. The Silurian rocks consist of sandstone, slate, and limestone, and exhibit evidence of metamorphism, particularly in the country around Bathurst and Hill End. Limestone beds, of considerable extent, are scattered throughout this formation. These are chiefly composed of crinoids and corals which outcrop prominently in the Wellington District, near Molong and Gulgong, at Tuena, and also in the Murrumbidgee District. In the limestone formations are found magnificent caves, such as the Wellington, Wombeyan, Fish River or Jenolan Caves, Bungonia and Abercrombie, the fame of which has spread even beyond the confines of Australia. The caves at Yarrangobilly, in the Kiandra District, are also very attractive.

The *Devonian* rocks are well seen at Mount Lambie, near Rydal, where the late Mr. C. S. Wilkinson measured a section of strata showing a thickness of not less than 10,000 feet. They also occur in the northern, southern, and western districts.

The *Carboniferous* Rocks.—The coal-bearing rocks are of three distinct systems, the first of which is, in all probability, of Lower Carboniferous age. Two seams, the one 5 feet and the other 7 feet in thickness, occur near the top of this system; but the coal in both cases is full of bands, and otherwise too dirty to be of any economic value.

The *Permo-Carboniferous* Rocks.—The second system, known as the Permo-Carboniferous, contains many seams of workable coal, which have been developed in both New South Wales and Queensland. Productive coal measures occur in this system in three horizons in New South Wales: the first and lowest of these is the Greta (Stony Creek) series, the second the Tomago (East Maitland) series, and the last and uppermost the Newcastle series. The total thickness of this system and its associated strata at Newcastle is about 11,000 feet, containing a total thickness of about 150 feet of coal, without taking into account seams of less than 3 feet in thickness. Borings at Cremorne, a point on the northern margin of Sydney Harbour, as well as at Holt-Sutherland and Liverpool, have confirmed the anticipations of the Rev. W. B. Clarke and Mr. C. S. Wilkinson as to the continuous extension of at least the upper or Newcastle series of coal-seams between Newcastle on the north and Bulli on the south. Reference to the operations of the Sydney Harbour Collieries Company will be found in the chapter dealing with Mines and Minerals.

MESOZOIC PERIOD.

The *Triassic* Rocks.—The third system comprises the Clarence Carboniferous basin, and is of Mesozoic age. Professor David estimates the length of that part of it which contains the principal seams to be about 65 miles from east to west, while its width is about 37 miles from north to south. The most remarkable beds in the Clarence basin are a series of massive whitish sandstones, which were considered by Mr. C. S. Wilkinson to be the equivalents of the Hawkesbury sandstones, and were named by him "The Middle Clarence Series," occupying as they do an intermediate position between the upper and lower coal-beds of the basin. None of the seams in this coal-field has as yet been proved to be of commercial value. Professor David estimates the top seam to contain 1 foot 9 inches, out of a total thickness of 5 feet 7½ inches, of coal fit for ordinary consumption, while the second and third seams have not yet been sufficiently tested to allow of a definite opinion being formed of their value. It is probable, however, that even if the seams prove to be of insufficient thickness and purity to yield coal fit for purposes of export, they may supply sufficient coal of fair quality for local requirements, especially if it be washed in suitable machines, such as Lührig's.

The Hawkesbury and Wianamatta series, which overlie the Carboniferous formation of that part of the country through which the Hawkesbury and its principal tributaries flow, belong to the Mesozoic period. It is in this series that the wonderful gorges of the Blue Mountains, and the beautiful harbours of Port Jackson, Port Hacking, and Broken Bay, occur. The rocks consist of grey, purple, and chocolate coloured shales, and yellowish-grey sandstones, and the maximum thickness of the strata is estimated at 1,700 feet. The Triassic rocks form the principal storehouse of the artesian water supply of the north-western portion of the State, where they underlie the Rolling Downs or Lower Cretaceous formation. Most of the deeper bores in this arid region obtain the bulk of their supply of water from the Triassic sandstones.

The Wianamatta formation extends round Sydney, and covers a space in the shape of an irregular triangle, the angular points of which rest at Picton on the south, Richmond on the north, and Sydney on the east. The beds are composed of fine sedimentary deposits of argillaceous shales, and are of comparatively little thickness. They appear to have been deposited in hollows worn by denudation out of the sandstone on which they directly rest. The Narrabeen shales, the Hawkesbury sandstones, and the Wianamatta shales do not contain any remarkable seams of coal. All three formations are intersected by igneous dykes, which have also intruded the underlying Permo-Carboniferous rocks, and where they have come in contact with the coal-seams, the latter have been converted into coke, sometimes to a thickness of 3 feet or more.

Jurassic rocks have been recognised in only one locality in New South Wales, viz., on the Talbragar River, about 20 miles north of Gulgong, where they occupy a denuded hollow in the Hawkesbury sandstones. They are of small extent, and consist of yellowish shales containing numerous fish and plant remains.

The *Cretaceous* formations occupy the north-western part of the State, extending from the Barwon westward towards the north-west corner. Water-bearing strata have been reached at depths varying from 89 feet to 2,070 feet, and large quantities of water have been obtained, though principally from the underlying Triassic sandstones. The existence of subterranean water throughout this extensive region has been practically demonstrated, and it remains for the settlers to avail themselves of the stores with which Nature has charged her reservoirs in the ages that have long since been counted out. The steps already taken in regard to utilising the artesian water are described below.

CAINOZOIC PERIOD.

To this period belong the deposits covering the greater portion of the central and western districts of the State. It therefore embraces the valleys of the great western rivers and their chief tributaries. The formation is, however, intersected by a broad broken belt, chiefly of Silurian rocks, extending across its centre, from the Bogan River towards the Great Barrier Range on the farther side of the Darling. Large patches of Devonian rocks are also met with in the same region. Making these deductions, the *Post-Tertiary* rocks cover more than one-third of the whole State. The vast alluvial plains were formed during the Pliocene and Post-Pliocene periods. The alluvial deposits are of variable thickness, sometimes shallow; but in the great plains, between the main rivers which intersect the country, the deposits are of very great depth.

IGNEOUS AND METAMORPHIC ROCKS.

The area occupied by these rocks comprises one-eighth of the State, the principal rocks belonging to the series consisting of varieties of granite, quartz-porphyry and felstone, diorite, basalt, and serpentine. Granite occurs for the most part in the northern and southern masses of the Great Dividing Range, but is found outcropping throughout the Silurian deposits, which cover so large a part of the centre of the

State. Diorite and basalt occur principally in the country between the Macleay and Manning Rivers, and on both slopes of the Liverpool Range, between the upper waters of the Namoi and Macleay. Serpentine is found scattered in different parts of the State, chiefly at Gundagai, Bingara, Lucknow, Nundle, Yulgilbar on the Clarence River, and Port Macquarie. The granites, quartz-porphyries and felstones have been recognised as belonging to the Palæozoic age; whilst the volcanic rocks, basalts, and others are chiefly contemporaneous with the Tertiary series. At Kiama there is an immense development of interbedded basalt lavas and tuffs in the Permo-Carboniferous rocks.

ARTESIAN WATER.

Before actual boring operations proved that the belief was well founded, it had long been scientifically demonstrated that there was every probability of water being obtained in the Triassic formation which underlies the whole of the north-western portion of New South Wales—a region favoured with only a sparse rainfall.

It was not until 1879 that artesian boring was attempted in New South Wales. In that year operations were begun at Kallara, a station lying between Bourke and Wilcannia. The supply was tapped at a depth of 140 feet, and the effluent water rose to a height of 26 feet. In 1884 the Department of Mines put down its first bore in search of water, a small supply of which was reached at 89 feet. Since then much work has been done, both by the Government and by private enterprise. That artesian water is obtainable in other than Cretaceous rocks is borne out by palæontological evidence, and some of the most successful bores, such as those at Coonamble, Moree, Gil Gil (Moree to Boggabilla), and Euroka (Walgett to Coonamble), have pierced rocks of Triassic age, corresponding with the Ipswich Coal Measures; indeed, it is now generally recognised that the bulk, if not the whole, of the artesian water of New South Wales is derived from porous rocks of Triassic age.

In 1905 there were fifty-five completed Government flowing bores, yielding approximately 30,000,000 gallons daily, while there were in addition twenty-five bores from which the water supply was obtained by pumping. The deepest bore sunk in the State is situated at Dolgelly, on the Moree-Boggabilla road, where a depth of 4,086 feet has been reached, the water issuing at a temperature of 130 degrees Fahr., with an average daily supply of 682,200 gallons. The next deepest is situated at Wallon, on the same road, the depth being 3,747 feet. From this bore there is a flow of 810,000 gallons per diem, the temperature of the water being 124 degrees Fahr. The largest flow is obtained at the Kenmare bore, on the road from Bourke to Hungerford, the daily average being 2,050,000 gallons. In addition to the Government bores, there are 253 completed private bores, full details of the supply from which cannot be given, while there are two Government and twelve private bores in progress. Further reference to the subject will be found in the chapter dealing with the Pastoral Industry.

HISTORICAL SKETCH OF NEW SOUTH WALES.

On the return to England of Cook's famous expedition, the imagination of the public was fired by the accounts of the earthly paradise discovered beyond the seas. Any idea of utilising the new possession was, however, for the time being, impracticable, as the nation was on the verge of war with the American colonies, and it was not until the termination of that unfortunate struggle in the year 1783 that attention was again directed towards the possibility of founding a settlement in Australia.

Such bitter feelings had been engendered by the war that it was next to impossible for British sympathisers in America to live side by side with their conquerors, and a scheme was propounded by James Matra, who had been a midshipman on the "Endeavour," under which these "loyalists" were to be settled in New South Wales. The idea, however, did not appeal very strongly to the Imperial authorities, and, besides, the new country was wanted for another purpose. For over a hundred years it had been the custom to transport convicts to the American colonies, but the outbreak of the war, of course, put an end to the practice. By the time peace was signed, the prisons had become dangerously overcrowded, and an outlet was imperatively necessary. At first it was proposed to establish the settlement on the west coast of Africa, but this was found to be unsuitable, and it was then determined to utilise the shores of Botany Bay.

By order of Viscount Sydney, a fleet of eleven vessels was got together, consisting of the frigate "Sirius" (in which Captain Phillip, the first Governor, travelled), the tender "Supply," six transports and three store ships. According to a return dated 15th April, 1787, the "first fleet" carried out to Botany Bay 571 male and 158 female convicts, inclusive of 11 children, and a detachment of marines which, including 30 married women and 12 children, numbered 253. (In a statement forwarded from Sta. Crux., Phillip gives the number victualled on 10th June, 1787, as 1,015, the convicts numbering 558 men, 192 women, and 13 children.) A start was made from Plymouth on the 13th May, 1787, and on the 18th January, 1788, the "Supply" reached Botany Bay, followed in the course of the next two days by the rest of the fleet.

Governor Phillip was not long in discovering that Botany Bay was by no means an ideal spot for a settlement. The harbour was shallow, and insufficiently protected from adverse winds; the rich soil and beautiful meadows alluded to by Cook and Banks could not be found, while there was a very scanty supply of fresh water. Phillip, thereupon, with a small party, proceeded in a rowing boat to explore Port Jackson, and so impressed was he with the capabilities of this magnificent harbour, that he immediately determined on removing the settlement thither, choosing for its site the shores of a little inlet which he named Sydney Cove. The ships were therefore brought round as soon as possible, and on the 26th January, 1788, formal possession was taken of Sydney Cove, although the proclamation of the colony and the reading of the Governor's Commission did not take place until the 7th February. While the fleet was still in Botany Bay, two French vessels, the "Boussole" and the "Astrolabe," put in to refit. La Pérouse, the commander of the expedition, had been sent

sent on a voyage of discovery by the French Government, and in an encounter with the natives of the Navigator's Island several of his men were killed, and both the ships' long boats were lost. Shortly after his arrival at Botany, Père le Receveur, the naturalist of the expedition, died, and was buried on the shore of the bay, a monument marking his last resting-place. After a stay of two months, La Pérouse sailed away, and for forty years nothing more was heard of the expedition. Its ultimate fate was ascertained by Captain Dillon, who discovered that the vessels had been wrecked on a coral reef off the Mallicolo Islands.

From the very outset the infant colony was beset by grave difficulties. When the work of clearing the woods and providing quarters and hospital accommodation was taken in hand, it was found that there were very few capable mechanics amongst either soldiers or convicts. Many of the convicts were lazy, and a large number were in poor health, while there was much quarrelling among the officers. After the soil had been got ready for tillage, it was discovered that no one had any practical acquaintance with farming. Some of the sheep and cattle died, others strayed away and were lost in the bush. Major Ross, the second in command, declared that, "It will be cheaper to feed the convicts on turtle and venison at the 'London Tavern' than be at the expense of sending them here." The blacks, also, were troublesome, but most of their outrages were committed by way of reprisal for the cruelties of the white inhabitants. All writers on early Australian history point to this disagreeable fact. Phillip gives it as his opinion that the natives were not the aggressors. Collins says much the same thing; while Caley, the botanist, who had special opportunities for gaining accurate knowledge on the subject, states that he was persuaded that the whites were themselves responsible for most of the atrocities which the natives committed. Even during the first few days at Botany Bay the natives were greatly incensed by the white people stealing their implements of warfare or the chase, which were sold as curios to the people on the ships. Later on in the Colony's history, it is well known that in numerous instances the natives were cruelly ill-treated, while they were actually instigated to some of their most lawless acts by escaped convicts.

Despite all the worries, Governor Phillip never lost heart, but battled bravely on. It was his aim to make the new colony, as far as possible, independent of outside supplies; so that, when the land at Farm Cove proved unsuitable for agriculture, he lost no time in seeking elsewhere, and good land was discovered at Parramatta. A branch settlement was formed at Norfolk Island, under Lieutenant King, in February, 1788. In connection with the present development in the mineral industry it is interesting to note that in a despatch dated 28th September, 1788, the Governor remarks that "the country is thought to possess iron, tin, and silver," but that "I give no encouragement to search for them, as they would prove a curse at the present time."

It had been arranged, prior to leaving England, that the Colony should never be left for more than a year without replenishing the King's stores. In accordance with this arrangement, the "Guardian," transport, had been despatched from England with supplies in August, 1789, but was wrecked near the Cape of Good Hope. To add to the distress occasioned in the Colony by the non-arrival of this store-ship, a fresh batch of convicts came out in the "Lady Juliana." The "Sirius" was hurriedly despatched to the Cape of Good Hope for supplies, and returned in May, 1789, but the stock of provisions was being depleted, and famine stared the colonists in the face. In February, 1790, there was not four months' supply in the stores, even at half rations. Under the circumstances, the Governor deemed it advisable to divide the settlement, and send some of the inhabitants, with a portion of the supplies, to Norfolk Island, on board the "Sirius" and "Supply." The "Sirius" was, unfortunately, wrecked near the island, and a large quantity of stores lost. The little company was reduced to desperate straits, and had to subsist mainly on the sea-birds which nested on the island. Meanwhile, matters on the mainland were in no better case, a prominent resident stating subsequently "that for three years he lived in constant belief that he would one day perish of hunger." Relief arrived, however, in June, 1790, through the advent of three store-ships. Soon afterwards, in 1791, what is known as the "Second Fleet" arrived, and consisted of one store-ship and ten transports containing convicts. Although there were subsequent periods of scarcity, the community was never again threatened with absolute starvation.

At the close of the year 1792, Phillip resigned office and returned to England. During his term of administration the young colony had made substantial progress. Sydney had more than a thousand inhabitants, and Norfolk Island about 900. At the Rosehill settlement there were 2,000 people, and the agricultural industry was advancing rapidly. The valley of the Hawkesbury had been explored, and good land was found at various points along its course. Roughly speaking, the total population at the end of 1792 may be given as 5,000.

As remarked previously, some of the cattle had strayed away from the settlement in its early days, through the carelessness of the person appointed to look after them, and there was great surprise and joy when a fine herd of their descendants was found in a wild state near the Nepean River in 1795. The fact that the animals had increased in size and general appearance afforded ample proof of the nutritious qualities of the natural herbage of the country.

In 1790 and 1791 the New South Wales Corps was raised in England for special service in the Colony, and when Governor Phillip was leaving the settlement he handed over the administration to Major Grose, the new regiment's commander. The presence of this corps turned out to be a thorough curse. Its officers were by no means of the best type. They mostly joined the service with the idea of making money. One of the first acts of the new administration was the creation of a sort of military despotism. The ordinary civil authorities were utterly flouted. Many of the officers and men led openly immoral lives, to the amusement or disgust of the inhabitants. The soldiers became almost the only merchants, and many of them made large fortunes by obtaining goods at prime cost from the Government stores and retailing them at an enormous profit. The greatest gains were made on spirits of various kinds, which were all included under the term "rum." Later on a large quantity of "rum" was distilled in the Colony from wheat and other grain grown in the Hawkesbury district, while some of the inhabitants manufactured a potent spirit from their surplus crop of peaches. The eradication of this trade, with its consonant evils, formed one of the hardest tasks of the early Governors. Another cause of dissension was occasioned by the division of official authority in the first few years of the Colony's history. The first four Governors were naval men, accustomed to naval discipline, and impatient of any interference with what they considered their powers and privileges. Side by side with these were the officers of the New South Wales Corps, who were equally jealous as regards what was due to their military position. Clashing of interests was inevitable, and matters in this connection reached a crisis with the arrest and deposition of Governor Bligh.

An important event in the year 1793 was the arrival of the "Bellona," the first free emigrant ship. The settlers who arrived in her at first took up land at Liberty Plains, about 8 miles from Sydney, but later on they removed to the Hawkesbury. In his despatch of the 5th November, 1790, Governor Phillip mentions that the first settler on the lands of the State was a time-expired convict named James Ruse, who entered on his farm of 30 acres at Parramatta on the 21st November, 1789.

The Home authorities for some time refused to accept Phillip's resignation, in the hope that he might be induced to return to the Colony, and it was not until 1795 that the new administrator, Governor Hunter, assumed office. In his first despatch Hunter alluded to the scarcity of provisions and lack of agricultural implements in the Colony, while he also complained that the public works were retarded through the absorption of convict labour by the civil and military officers. The time-expired prisoners at this period proved a source of great embarrassment, several of them turning to bushranging, while others indulged in petty thieving round the various settlements. There was also considerable trouble with the soldiery, and this led Hunter to suggest the propriety of occasionally changing the garrison. Had the Imperial authorities adopted this course, it is certain that the unfortunate episodes in Governor Bligh's viceroyalty would never have come to pass. The summer of 1798-9 was marked by one of the first recorded droughts in the history of the Colony, but this was immediately succeeded in the Hawkesbury district by a disastrous flood which swept away the homes of many of the settlers, and for a time paralysed all industry in that division. The live stock in the Colony in 1792 was only 182, whereas in 1800 there were 203 horses, 1,044 cattle, 6,124 sheep, and 2,182 goats. It is interesting to note that the first plough put into Australian soil was used on Macarthur's farm at Parramatta in 1795. As illustrating the value of stock in these early days, it may be stated that it was impossible to procure a horse for less than £100, while cows were sold at from £80 upwards. One of the most noteworthy events in Hunter's period of administration was the discovery of coal, in 1797. The existence of the mineral was first reported by some shipwrecked refugees who had made their way overland from Point Hicks to Sydney. At the locality where they discovered it, in the Illawarra district, the seam was so difficult of access that its exploitation was at the time regarded as impossible. In the same year, however, Lieutenant Shortland, who had gone northwards in pursuit of some runaway convicts, discovered the Hunter, or Coal River, as it was originally named, and noted the deposits of coal near its mouth. Before very long, steps were taken to utilise the discovery, and the town of Newcastle was founded. Up to 1821 the mines were worked entirely by convict labour. In a despatch dated 21st December, 1798, the Duke of Portland recommended Governor Hunter to export coal to the Cape, and to receive therefrom in exchange live stock for the use of the settlement in New South Wales. The growth of the export trade was, however, at first but slow. The first recorded shipment was in 1801, being paid for at the rate of £2 5s. per chaldron.

The expeditions of Bass and Flinders during this period are amongst the most marvellous in the annals of exploration. Bass was a surgeon, and Flinders a midshipman on the "Reliance," the vessel which brought out Governor Hunter. Their first expedition was undertaken in a boat 8 feet long, which they christened the "Tom Thumb," their object being to discover a supposed large river to the south of Sydney. The river turned out to be only an arm of the sea, which they named Port Hacking, but they went as far south as the Tom Thumb Lagoon, in the Illawarra district, and, on the voyage back, were nearly wrecked by a "southerly buster." In the following year (1797) Bass sailed in an open whaleboat on a more ambitious voyage. With a crew of six, and provisions for six weeks, he examined the coast southward from Sydney, discovering the mouth of the Shoalhaven, touching at the already known Jervis Bay, and discovering the fine inlet of Twofold Bay. Then, passing round Cape Howe, he discovered and thoroughly explored the inlet known as Western Port.

In August, 1798, Flinders and Bass set off together in the sloop "Norfolk," of 25 tons, and on this occasion demonstrated the insularity of Tasmania by circumnavigating it. The passage between the mainland and the island was called Bass Strait, by Governor Hunter. In 1799 Flinders sailed in the "Norfolk" northwards from Sydney and proceeded as far as Hervey Bay, making a careful survey of the coast and recording excellent sailing directions.

As showing the disabilities in the way of transport suffered by the early colonists, it may be noted that the successful accomplishment of a voyage from England to Australia in 1799, by the "Albion," in the space of three months fifteen days was looked upon as little short of marvellous. The vessel was 86 feet long, and had a tonnage of 362.

Governor King arrived in Sydney with authority to relieve Governor Hunter in April, 1800, but did not assume the administration till some months later. In a despatch sent to Hunter prior to his leaving the Colony, the Duke of Portland preferred several charges of maladministration against him, such as paying exorbitant prices for produce, neglecting to restrain the trade in spirits by the military and Government officials, &c. There is no doubt that Hunter's recall was unjust, for his honesty was unimpeachable, but he was evidently lacking in the firmness and decision of character required in ruling a Colony composed of such turbulent elements.

From the talent and energy that King had displayed in the formation of the branch settlement at Norfolk Island, it was thought that he would make a successful administrator, but the rum-trade interests proved too strong for him, and he was glad to resign in 1806. In a letter to the Under Secretary, King remarks as follows:—"Situated as the Colony was when I took command, every step I made clashed so much with the interest of trading individuals, both commissioned and non-commissioned, that all set their wits to work not only to thwart my exertions but also to use every measure that art, cunning, and fraud could suggest to impede my efforts." Shortly after his arrival he drew the attention of the Home authorities to the lack of a circulating medium in the Colony, and 4 tons of copper coin of the value of 1d. each, and total value of £550, were sent out in 1800. Each coin was issued at the rate of 2d., and it was made a penal offence to export any quantity in excess of £5 worth of this coinage. This, however, was not the first shipment of money to the Colony, as £1,000 worth of dollars had been sent out in 1792. For some years prior to his arrival, French vessels had conducted exploratory work along the coasts, and it was the fear lest they should attempt to found colonies that induced King to send Lieutenant Bowen to the Derwent in 1803, and Colonel Paterson in the following year to the Tamar. Colonel Collins had been sent from England to occupy Port Phillip, but the settlement there was, later on, moved to Tasmania. It is interesting to note that in 1801 two French vignerons arrived in Sydney for the purpose of superintending the wine-growing industry. Progress in this direction was, however, for a long time comparatively slow.

During King's administration the first serious rising among the convict population took place. In 1804, a party of convicts, some 300 strong, was employed in road-making at a place called Castle Hill, between Parramatta and Windsor. Seizing a favourable opportunity they overpowered and disarmed their guards, and then marched in the direction of the Hawkesbury where they counted on gaining support from the disaffected settlers. Major Johnston, the military commander, marched against them with a mere handful of soldiers, and after a struggle of about fifteen minutes' duration the insurgents laid down their arms. The casualties amounted to 12 killed, and 6 wounded, while 26 were taken prisoners, 8 of the latter being subsequently executed.

As showing the consumption of spirits in the early days of the Colony's history, it appears from a published return that during the period from 3rd November, 1799, to 31st May, 1800, no less than 36,590 gallons of spirits and 22,224 gallons of wine were imported, while the total population was only about 5,500.

The coinage at this period was of a rather mixed description, and in November, 1800, Governor King found it necessary to issue a general order giving the denomination and rate of legal tender of the coins circulating in the Colony. These were as follows:—

	£	s.	d.		£	s.	d.
A Guinea	1	2	0	Rupee	0	2	6
Half Johanna	2	0	0	Dutch Guilder	0	2	0
Gold Mohur	1	17	6	English Shilling	0	1	8
Spanish Dollar	0	5	0	Copper Coin of 1 oz.	0	0	2
Johanna	4	0	0	,, ½ ,,	0	0	1
Ducat	0	9	6	,, ¼ ,,	0	0	0½
Pagoda	0	8	0				

Generally speaking, the Colony may be considered to have made substantial progress during King's term of office. The settlement had emerged from its state of dependence, so far as food was concerned, on the mother country, while the beginnings of commercial enterprise in the way of wool and whale oil were noticeable. By the year 1805 the pastoral industry was firmly established, and in this connection the name of Captain Macarthur stands out prominently. Although the first Spanish merinos were brought here in 1797 by Waterhouse and Kent, it is to Macarthur that the credit is due of seeing the great possibilities of the industry, and of having the courage and determination to follow it up. It was during King's administration that the birth of the Australasian press took place in the form of the *Sydney Gazette*, first issued in 1803.

The Hawkesbury district was again devastated by floods in 1806, when 36,000 acres were submerged, and about 23,000 bushels of wheat, 60,000 of maize, and 5,000 of barley were destroyed. Seven persons lost their lives, and it was stated that the river rose 70 feet over its usual level.

Governor King was succeeded in the administration by Captain Bligh, in 1806. The new Governor had already given proofs of wonderful courage and resourcefulness by his celebrated voyage after the mutiny of the "Bounty," and had greatly distinguished himself in the naval engagements at Camperdown and Copenhagen, and in connection with the mutiny at the Nore. He had been specially commissioned by the Home Government to abolish the rum traffic, which it appears had assumed such proportions that spirits were being freely used as payment for labour or goods. The Governor proceeded to deal with the business in his customary arbitrary fashion, and consequently incurred the odium of the officers of the New South Wales Corps. Matters reached a climax with the arrest of Captain Macarthur. A detailed account of the various circumstances which led up to Macarthur's apprehension cannot be given here, but it will suffice to say that the soldiers, aided by some of the civilians, did their utmost to render nugatory all Bligh's good intentions with regard to the liquor traffic. Macarthur's military friends procured his release, and this was followed by one of the most sensational episodes in the history of the Colony, namely, the arrest and deposition of Governor Bligh by the soldiers under Major Johnston. The Governor was arrested in January, 1808, and was kept in prison for twelve months, when he was allowed to resume command of the "Porpoise," on promising to proceed to England. He, however, put in at Tasmania, where he was nearly captured, and remained off the coasts of the Colony till May, 1810. For his share in these dramatic proceedings Major Johnston was tried in England in 1811, and cashiered from the service, while Macarthur was prohibited from returning to the Colony for eight years. It is a matter of extreme difficulty to estimate Macarthur's true position in regard to Bligh's arrest. Caley and others looked on Major Johnston as simply a tool in Macarthur's hands, and although Johnston was a brave man, a study of his character would lead one to believe that great pressure must have been brought to bear to induce him to take such an unprecedented step. In an address to Major Johnston the settlers alluded to Captain Macarthur as "the scourge of the Colony, and a fomenter of quarrels between His Majesty's officers, servants, and subjects." They further said that "his monopoly and extortion were highly injurious to the inhabitants of every description." Statements like these were of course in great measure due to jealousy of Macarthur's power and influence, but the fact nevertheless remains that he was a veritable thorn in the side of the first four Governors.

The news of Bligh's arrest awakened little interest in England, as the country was too much occupied with the great happenings in Europe to pay much attention to the squabbles in a far distant settlement. The Government, however, had come to recognise the futility of sending out sea captains at this period to manage the affairs of the Colony, and as successor to Bligh they appointed Brigadier-General Nightingall, while the New South Wales Corps was replaced by the 73rd Regiment. Nightingall, however, was prevented by illness from accepting the position, and Lieutenant-Colonel Macquarie was then selected. As he was an officer in the 73rd Regiment, the official jealousy between rival branches of the defence services was thus done away with.

Governor Macquarie took over the administration on the 1st January, 1810. Prior to leaving England he had been instructed to reinstate Bligh for a period of twenty-four hours, and to rescind the orders of the interim military despotism. The first of these tasks could not be carried out, and the Governor exercised his discretion with regard to the second.

Macquarie at once entered on a vigorous public works policy. New roads and bridges were built and extensive repairs effected to those already existing, while numerous public buildings were erected. The flocks and herds of the Colony at this period comprised 65,000 sheep, 21,000 cattle, and nearly 2,000 horses, and so rapidly were they increasing that an outlet was becoming imperatively necessary. Attention was therefore directed towards the possibility of finding a way over the Blue Mountains into the country beyond, and this was successfully accomplished in 1813 by Messrs. Wentworth, Lawson, and Blaxland. Prior to this several attempts had been made by other explorers such as Bass, Tench, Wilson, Caley, and Barrallier. The Governor lost no time in sending a surveyor to report on the practicability of making a road over the ranges, and the report being favourable, the work of construction was pushed forward so vigorously that, by 1815, a stream of settlement was passing westwards to the rich Bathurst Plains.

In one of his early despatches Macquarie expressed his amazement at the state of the Colony's currency. There was hardly any gold or silver, while the paper money was often repudiated, and it was impossible to obtain its real value. He recommended the establishment of a Government Bank, but this course was not adopted, the Home authorities sending out a fresh consignment of specie.

For a long time the Lachlan and the Macquarie Rivers mystified the early explorers. Oxley followed up the Lachlan in 1817 for more than 400 miles until he found further progress blocked by a swamp. He then struck off across country till he reached the Macquarie, passing through the rich Wellington valley on his way. Next year he went down the Macquarie until he again found his progress stopped by this supposed inland sea. From this point he struck away towards the coast, crossing the fertile Liverpool Plains and discovering the Hastings and Manning Rivers before his return to Sydney. Meanwhile, Hamilton Hume had forced a passage through the rugged country to the south-west, and discovered the valuable agricultural and pastoral lands round Lake Bathurst and Lake George, and by the year 1819 had pushed as far down as the Murrumbidgee. The known area of the Colony was increased some twenty times by these explorations.

Macquarie's administration has been the subject of varied criticism. Under his public works policy he erected 250 public buildings, and built numerous roads and bridges, thus affording labour for convict and settler, and developing the resources of the Colony. The name of George-street was applied to Sydney's principal thoroughfare by a General Order of August, 1810, while many improvements were made in buildings and means of communication throughout the metropolitan area. By some people, however, he has been accused of simply lavishing the Imperial funds for his own self-glorification. Although the era of the military rum-merchant ceased with the advent of Macquarie, nevertheless it is remarkable to find that some of the people engaged on the public works were paid their wages in rum, while the Governor himself was guilty of countenancing a deal in spirits in connection with the erection of the Sydney Hospital. In consideration of finishing the building within three and a half years the contractors were allowed to import up to 45,000 gallons of spirits. According to Lang the liquor cost 3s., and was sold at 40s. per gallon. His treatment of the "emancipists," as those convicts were called who had served their sentences, also roused a storm of hostile criticism from the "pure merinos," as the free settlers were called. Macquarie held that when a convict had served his sentence he should be regarded as a free settler, and admitted to the social amenities befitting his station. In fact he was too extreme in this regard, and looked on the free settler almost as an interloper. He quarrelled with Mr. Bent, the first judge of the Supreme Court, because he would not hear the pleading of an emancipated barrister, and, on the Governor's advice, Bent was recalled by Earl Bathurst. The Home Government sent out Mr. Bigge with a Commission to inquire into the state of the Colony, and this officer reported against Macquarie's extravagant expenditure and his treatment of the emancipists, but gave him credit in other directions. Whatever view may be taken on some matters, there is no doubt that under Macquarie's rule the Colony made substantial progress, and his departure was viewed with regret by the great bulk of the inhabitants.

The new Governor, Sir Thomas Brisbane, entered on his duties on the 1st December, 1821.

The recent important discoveries of good lands had been the means of attracting a considerable number of free settlers, many of whom possessed a fair amount of capital, and their advent was regarded with great satisfaction by the Government. This tide of immigration lasted throughout Governor Brisbane's term of administration. An event of great importance in Colonial history was the creation in 1824 of a Legislative Council, consisting of "five principal officers," this body with its restricted powers forming the nucleus of the present more extensive system of self-government. Trial by jury was also instituted in 1824, the first civil jury being empanelled on the 1st November in that year. The censorship of the Press was removed, and this liberty resulted in the issue of two newspapers, of which the chief was the *Australian*, edited by W. C. Wentworth. The old *Sydney Gazette*, which was first published in 1803, was formerly the only newspaper in the Colony, and was under complete Government control.

During Governor Brisbane's period of office the exploration of the interior was vigorously pushed forward. In 1823, Captains Stirling and Currie, in the course of an expedition to the southward, discovered the fertile district which they called the Brisbane Downs, but which is now known as the Monaro Plains. Next year Hovell and Hume penetrated from Lake George to the shores of Bass Straits, and discovered the Hume, Ovens, and Goulburn Rivers, reaching the north-eastern arm of Port Phillip on the 16th December, 1824. About the same time Allan Cunningham, a botanical collector for the Royal Gardens at Kew, discovered the Cudgegong River, about 50 miles northward of Bathurst, and the rich pastoral land in its basin was soon occupied by thriving settlements. Cunningham also discovered the Pandora Pass, leading from the Upper Hunter into the fertile district of Liverpool Plains. In 1823 Oxley discovered the Brisbane River, which flows into Moreton Bay, and is one of the largest rivers on the east coast of Australia. A branch penal settlement was formed on the banks of the river in the following year.

Governor Brisbane was succeeded in the administration by Governor Darling, who assumed office on the 19th December, 1825.

About this time the Australian Agricultural Company, which had been incorporated with a capital of a million sterling, commenced operations in the Hunter River district, where they had been granted a million acres of land. The extensive purchases of sheep and cattle by the agents of the Company caused a boom in prices, which led to the ruin of those who had overstocked in the ensuing dry years.

Darling tried to rule the Colony with a rod of iron, and it was not long before he found himself involved in serious difficulties. Some of his harsher measures he was foolish enough to attempt to justify in the *Sydney Gazette*, while he was most bitterly assailed in the columns of the rival papers. He then tried to interfere with the liberty of the Press by proposing legislation aimed at regulating the contents of the papers, but in this he was unsuccessful, and the struggle had not ended when he left in 1831.

Sturt's famous journey to the south-west interior was commenced in 1829. Reaching the Murrumbidgee, he followed its course until the usual swamps were met with, when the expedition took to the boats, and passing the Lachlan mouth entered the Murray, which Sturt followed down to the sea. The return journey against the swift current was only accomplished after great privations, and when the intrepid leader reached Sydney he was blind, and did not recover his sight for some considerable time. In 1827, Allan Cunningham, in the course of an exploration to the northward, crossed the Gwydir and Dumaresq, and discovered the splendid pastoral country in the Moreton Bay district known as the Darling Downs.

Governor Bourke arrived in the Colony on the 2nd December, 1831, and during the six years in which he administered the government he gained the respect and affection of all classes of the community. One of his first acts was to abolish the Government patronage to the *Sydney Gazette*, and so terminate the unseemly disputes which had harassed the administration of his predecessor. He lost no time in procuring more humane conditions for the convicts, and ensured greater fairness in their assignment to the settlers. Religious equality was secured in the Colony by the General Church Act of 1836, which continued in force till the year 1862. The first steps also were taken in the path of constitutional reform, but the movement did not reach its full fruition until after the arrival of Gipps.

The explorations of Sir Thomas Mitchell, undertaken during Governor Bourke's administration, added greatly to the knowledge of the interior. In 1835, Mitchell proceeded westward from Boree, near Bathurst, along the Bogan to the Darling, which he followed for 300 miles. In the following year he traced the remaining 130 miles of the Darling's course, visited the head waters of the Murray and the Murrumbidgee, and then struck off southward through the beautiful district which he named Australia Felix, and which now forms part of the State of Victoria.

Sir George Gipps, the ninth Governor of New South Wales, assumed office on the 24th February, 1838.

With the opening up of the splendid country round Port Phillip, a strong tide of immigration had set in towards the Colony. A large number of those who came out were possessed of capital, and in the rush for land prices rose considerably. After a time they passed the margin of safety, and then the inevitable crash came, involving the ruin of the Bank of Australia and various other financial institutions. This happened in 1843, and in 1844 the Governor, in order to replenish the depleted coffers of the State, propounded a scheme under which the squatters were to be forced to purchase a certain quantity of land every year at the minimum price—a course of action which resulted in a storm of discontent. In 1842 a Constitution Act was passed providing for a Legislative Council of thirty-six members, six of whom were Government officers, six Crown nominees, and the rest elected by the people—eighteen in New South Wales, and six in Port Phillip. An event of great moment under the Gipps administration was the abolition of transportation to New South Wales, which was effected under an Order-in-Council passed in 1840, Tasmania and Norfolk Island being made the only convict settlements in Australia.

Sir George Gipps left the Colony on the 11th July, 1846, and was succeeded on the 2nd August by Sir Charles Fitzroy, who administered the affairs of New South Wales until the 20th January, 1855. During Fitzroy's government some of the most momentous events in the history of the Colony took place. In ignorance of the state of public feeling in New South Wales, the Imperial authorities announced their intention of renewing transportation; but when the "Hashemy" arrived in Sydney laden with convicts in 1849, popular indignation reached such a pitch that the Governor ordered the vessel on to Moreton Bay, where the settlers gladly availed themselves of the labour thus provided. A strong anti-transportation league was formed in the Colony, and in consequence of its representations the Home Authorities gave their assurance that under no conditions would the practice of transportation be renewed.

For some years the inhabitants in the Port Phillip district had been agitating for separation from the parent settlement. They had argued that, owing to the distance, it was difficult to get representatives to leave their district to attend Parliament in the metropolis, and that they had perforce to accept the services of Sydney residents, who were not sufficiently alive to the needs of Port Phillip. Matters reached a climax in 1848, when the residents of Melbourne actually elected Earl Grey himself as one of their representatives, while some of the inhabitants wanted to go so far as to elect prominent English public men to the other five seats. The Home Authorities thereupon appointed a Commission to devise a scheme for conferring self-government on the Australian colonies, and this body recommended that Port Phillip should be separated from the older Colony, and be called Victoria. The necessary legislation to give effect to this proposal was passed by the New South Wales Government in the year 1851.

The gold discoveries of 1851 exercised a most momentous effect on the destinies of the Colony, and in fact "precipitated Australia into nationhood." For some years prior to 1851 there were grounds for believing that deposits of precious metal would eventually be found.

Strzelecki discovered traces of gold near Hartley as early as 1839, in the time of Governor Gipps; but the latter, fearful of the effect that such news might have on the convicts, persuaded him to refrain from publicly mentioning it. In 1841 the Rev. W. B. Clarke found grains of alluvial gold near Bathurst; while three years later Sir Roderick Murchison, the eminent English scientist, stated his belief that the Dividing Range would be found as rich in gold as the Urals of Europe. News of the Californian discoveries reached New South Wales in 1849, and amongst those who joined in the rush to that country from Australia was Edward Hargraves. While at the diggings in California, he was struck by the similarity between the country round him and that of a particular locality in New South Wales, and so obsessed did his mind become with this idea that he resolved to return home and prospect at the spot. In February, 1851, he proceeded to the junction of the Lewis Ponds and Summer Hill Creeks, where he at once struck alluvial gold. Hargraves' discovery was soon followed by finds in various other parts of the Colony, and "rushes" set in to the different fields. The effect of the gold discoveries on the economic condition of the Colony was at first disastrous. Professional men, tradesmen, agriculturists, and labourers of all classes left their usual avocations and flocked to the diggings. Ship after ship arrived in Sydney harbour laden with eager gold-seekers, and in many cases even the crews deserted and joined in the race for wealth. Prices rose prodigiously, while production was almost at a standstill. The crowds of lawless characters who gathered at the various diggings caused endless trouble as regards police arrangements, while the unsuccessful and penniless prospectors who clustered in the metropolis were also a source of much anxiety to the authorities. Later on, when the gold fever had abated somewhat, many of those who had failed to reap a sudden fortune found that wealth could be surely, if more slowly, acquired by following their ordinary employments, and it was in this spirit that the foundations of sound progress were laid.

According to the report of a Select Committee of the Legislative Assembly brought up in 1891, Hargraves was not the actual discoverer of payable gold, the credit being due rather to Messrs. W. and J. Tom and Lister, to whom Hargraves had taught the proper methods of searching for the precious metal. The report goes on to state that what is known to miners as "payable gold" was not found until the month of April, 1851, when Messrs. Tom and Lister succeeded in unearthing about 4 oz., which were handed to Hargraves, and by him exhibited to the Colonial Secretary, "whereupon Mr. Hargraves was thus recognised as the first discoverer of gold in Australia, and subsequently was rewarded by a gratuity of £10,000 from the Government of this Colony, and upwards of £2,300 from the Colony of Victoria, and in addition to these sums has been in receipt for several years of a pension of £250 per annum from this Colony."

Sir Charles Fitzroy was succeeded in the Governorship by Sir William Denison on the 20th January, 1855. Towards the close of this year the Royal assent to the new Constitution was received, and the first Parliament under the new order met on the 22nd May, 1856. The following year was one of the most disastrous in the history of the Colony. Torrential rains had been followed in many districts by devastating floods, occasioning great loss of life and damage to property, the Hunter and Hawkesbury districts especially suffering. In addition, the "Dunbar" was wrecked at the Gap, near Sydney Heads, and out of 120 persons on board—many of them colonists returning from Europe—only one man was saved. Shortly after this, twenty-one lives were lost in the wreck of the "Catherine Adamson," also in the immediate vicinity of the Heads. To guard against a repetition of similar calamities, the coastal lighting was improved, and the lighthouse erected at South Head is amongst the finest in the world. Further discoveries of gold were from time to time reported. The rush to the Canoona diggings, in Port Curtis district, terminated disastrously, the Government having to provide the means whereby many of the unsuccessful diggers could return to Sydney.

The Moreton Bay district was separated from New South Wales in 1859, and was erected into a distinct Colony under the name of Queensland, Sir George Bowen being appointed its first Governor.

Sir William Denison left New South Wales on the 22nd January, 1861, and was succeeded by Sir John Young, who arrived on the 22nd March.

At the very outset of his administration the new Governor was called upon to deal with a constitutional crisis. Mr. Robertson had again introduced his Land Bills, embodying the principle of free selection, which was so distasteful to the squatting interests in the Upper House. Accepted by the Lower House, the measures were rejected by the Legislative Council, and the Governor thereupon granted a dissolution of Parliament, and a general election was held. At this election the policy of the Government was unanimously supported; but the Council still proving obdurate, sufficient new members were created to swamp the opposition and carry through the proposed legislation. When the new Councillors appeared in the Chamber the old members left in a body, and as the newcomers could not be sworn in, the Council ceased to exist. A fresh body of Councillors was therefore appointed, and the Crown Lands Alienation Bill and Crown Lands Occupation Bill soon became law. Further reference to land legislation will be found in the special chapter dealing with the subject.

Sir John Young's period of administration terminated on the 24th December, 1867, and the new Governor, the Earl of Belmore, assumed office on the 8th January, 1868. In the same month the Duke of Edinburgh visited the Colony, and in the midst of the festivities celebrated in honour of his arrival an attempt to assassinate him was made by a man named O'Farrell, on the 12th March. A great deal of bitter feeling was engendered in the Colony by the statement that the murder of the Duke had been deliberately planned by a certain section of the community, and hasty legislation was passed by the Government with the object of suppressing treasonable or seditious practices or assemblies.

As the year 1870 was the anniversary of the discovery of Australia by Captain Cook, it was resolved to mark the occasion by holding an exhibition illustrative of colonial progress. Victoria, Queensland, South Australia and Tasmania contributed exhibits, and the exhibition, which was held in a fine building in Prince Alfred Park, Sydney, was in every way a great success.

The Earl of Belmore was succeeded in the administration by Sir Hercules Robinson, who assumed office on the 3rd June, 1872.

In 1873 the Colony lost the services of one of its most distinguished politicians, in the person of Mr. W. C. Wentworth, whose death took place on the 7th May, both Houses of Parliament adjourning as a mark of respect to the deceased statesman. It was about this time that what has been termed a "vigorous public works policy" became the order of the day, and for some fifteen years the Government continued to expend large sums of money in the construction of works and services which, in many instances, were far in advance of requirements. In 1874 an important constitutional enactment, known as the Triennial Parliaments Bill, was placed upon the statute book, this measure fixing the duration of Parliament at three years instead of five as was the case previously.

Sir Hercules Robinson remained in office till the 19th March, 1879, the new Governor, Lord Loftus, taking over the administration on the 4th August.

During the Loftus administration some most important legislative enactments were passed into law. The "Public Instruction Act of 1880" dissolved the old Council of Education, and handed over its powers to a Minister of Public Instruction, while provision was made for the training of teachers and the co-ordinating of the various branches of educational effort. Under the Electoral Act, which was assented to in the same year, the old Act of 1858 was repealed, and the Colony was divided into 68 electoral districts with 103 representatives. Another important measure was the Church and School Lands Act, also passed in 1880, which transferred to Parliament the control of the Church and School Lands, and provided that the income arising therefrom was to be applied to the purposes of public instruction.

A very successful International Exhibition was opened in the early part of the Loftus administration, and had the effect of attracting considerable outside attention to the varied products of the Colony. The Garden Palace, which housed the exhibits, was unfortunately destroyed by fire in the year 1882, and many valuable documents were destroyed.

The rich silver lodes in the Broken Hill district were discovered in 1883, and the Broken Hill Proprietary commenced operations two years later. For many years the field has ranked amongst the foremost silver and lead producing areas of the world.

An event which afforded striking testimony of the loyal attachment of the Colonies to the homeland was the despatch in 1885 of a Contingent of troops to assist the British arms in the Soudan. The detachment left Sydney in the "Iberia" and "Australasian," on the 3rd March, amidst a scene of intense enthusiasm. Although the number of men sent was comparatively small, and took little part in actual hostilities, the incident undoubtedly was the means of arousing a new estimate of the value of the British Colonial Empire.

Public attention had for some years been directed to the large influx of Chinese, and it was felt that the time had arrived when something should be done to stop indiscriminate immigration of this character to the Colony. This was, for the time being, effected by the Chinese Restriction Act of Sir Henry Parkes, which received the Royal assent on the 6th December, 1881. Under the provisions of the Act shipmasters were forbidden to carry more than a limited number of Chinese passengers to the ports of the State, while each of these immigrants had to pay a tax of £10 before being allowed to land. Stringent penalties were provided for any infraction of the law. It will be seen later on that this law was succeeded by other legislation of a still more drastic character. Lord Loftus' term of office expired on the 9th November, 1885, and his successor, Lord Carrington, took over the administration on the 12th December following.

Prior to 1887 coal-mining in New South Wales had been singularly free from disasters of any magnitude, such as occasionally occur in other parts of the world, but early in that year the Colony was stunned by the news of a dreadful calamity at the Bulli Colliery, in the Illawarra district, when eighty-three miners lost their lives through an explosion of gas in the workings of the mine. Relief Committees were immediately formed, and in a short space of time large sums of money were collected in aid of the widows and orphans of the unfortunate victims. As the result of an inquiry instituted by Parliament into the causes of the accident, steps were taken with a view to minimise the possibility of its recurrence.

Despite the "Chinese Restriction Act of 1881," large numbers of these aliens continued to arrive in the Colony, the number who came in during 1887 being considerably over 4,000. Public indignation was so aroused by fears of a similar invasion during succeeding years that the Premier, in 1888, actually took the illegal step of forbidding the captains of two vessels to land contingents of Chinese immigrants. The owners of the vessels, however, took the matter into court, and Sir Henry Parkes was forced to give way; but on the 11th July, 1888, a further Chinese Restriction Act was passed which prohibited the carrying of more than one Chinese immigrant to every 300 tons of the vessel's burthen, and imposed a poll tax of £100. In consequence of this repressive legislation Chinese immigration fell away considerably, only seven entering the Colony in 1889.

The period from 1885 to 1895 was marked by considerable disturbance in economic conditions. The vigorous public works policy previously alluded to, ceased at about the beginning of the epoch, and, in consequence, a large number of unemployed were thrown on the labour market, and wages in most trades underwent a serious decline. In addition, the numerous strikes which characterised the period also had an unhappy effect on trade and wages. Much distress was caused in the southern district in 1886-7 by a strike which involved the cessation of labour at several of the southern collieries. This was followed in 1888 by a strike of 6,000 coal-miners in the northern district. In 1890 a strike at Broken Hill led to the closing down of the silver-mines. Following on the pronouncement of the Intercolonial Labour Conference, over 40,000 men ceased work, and being joined by the draymen in the metropolis, for a time paralysed the wool trade, while the shearers' strike in the same year involved some 20,000 workers. In 1892 the Broken Hill silver-mines were laid idle for four months through a strike of the local miners. In addition to these disastrous events, the closing years of Lord Carrington's administration were marked by devastating bush fires in portions of the Colony, followed by destructive floods, the northern coastal districts especially suffering in 1890 from inundations.

Lord Carrington's term of office lasted till the 1st November, 1890, and on the 15th January, 1891, he was succeeded by the Earl of Jersey.

Early in March, 1891, a Federal Convention, consisting of delegates appointed by the various Australasian Parliaments, met in Sydney and drew up a draft Constitution Bill, and although this measure at the time aroused no popular enthusiasm in the States, it nevertheless formed the basis upon which the present Constitution was constructed.

An outcome of the industrial disturbances in the years immediately preceding 1891 was the formation of a definite "Labour Party" in State politics, and from this time forward the influence of labour has had a marked and important effect on the trend of legislation. Successful efforts to enter Parliament had, prior to 1891, been made by professed labour candidates, but it was in this year that the first concerted action was taken by duly accredited representatives of an organised political labour party. At the general elections in June the nominees of the party entered the political arena, pledged to the support of a platform of sixteen clauses, and secured eighteen out of the fifty-two seats in the metropolitan division, in addition to polling heavily in several others. When the time came to count heads in the ensuing Parliament it was found that there were thirty-five labour members, while over a dozen others were prepared to subscribe to their platform. Since 1891 the party has undergone considerable vicissitudes, while its platform has, from time to time, been remodelled, but it has been instrumental in securing the passage of a fair amount of industrial legislation.

The Earl of Jersey's governorship terminated on the 1st March, 1893, and his successor, Sir Robert Duff, assumed office on the 29th May following. It was at about this period that the series of financial disasters occurred which are generally alluded to under the designation of the Banking Crisis of 1893. The approach of this crisis had been heralded by several signs. As early as 1891 several land companies and building societies, whose business had been conducted on an unsound basis, failed to meet their obligations. In 1892, in consequence of a groundless rumour, there was a temporary run on the Savings Bank of New South Wales. In March, 1892, a fresh impetus was given to the feelings of distrust and alarm by the failure of the Mercantile Bank of Australia at Melbourne. During the course of the following month the Bank of South Australia and the New Oriental Bank failed to meet the demands made upon them. The uneasiness deepened, and all efforts to stem the gathering tide of disaster proved unavailing. On the 29th January, 1893, the Federal Bank of Australia suspended payment, followed by the Commercial Bank of Australia on the 5th April, while by the middle of May no less than thirteen out of the twenty-five banks of issue were forced to close their doors. The securities of a large number of these institutions consisted of real estate, and could not, therefore, be converted into cash at short notice, while several of them possessed large holdings of Government stock and debentures which were only readily saleable in London. The English banks hastened to the rescue, and a shipment of £900,000 in gold was despatched to the colonies from London. Valuable aid was also rendered by the Dibbs Government in New South Wales proclaiming bank-notes to be a legal tender and guaranteeing their payment for a period of about seven months, after which State assistance was no longer required. Although public confidence received a rude shock by these untoward experiences, there can be no doubt that the crisis of 1893 was in some measure a blessing in disguise, for it led to a more rigid scrutiny of their securities by both the banks and the public, while it had the effect of putting an end to the bogus institutions which gulled the public by paying interest out of capital, and various other nefarious devices.

Fresh labour troubles occurred in 1893, culminating about the middle of the year in a general strike of the seamen engaged on the intercolonial steamers. Trade was for a time paralysed, but the employers were assisted by numerous bands of volunteer workers, and the strike ended in the defeat of the workers. The year 1894 saw a recrudescence of industrial disturbances, a strike of shearers in New South Wales and Queensland for a time disorganising the wool trade. Efforts were made to prevent the recurrence of these unfortunate disputes by the formation of a Board of Conciliation and Arbitration, but the scheme was unsuccessful, and it was not until some eight years later that practical legislation was passed to deal with the evil in the shape of the Industrial Arbitration Act of 1901.

In July, 1894, the Ministry of Sir George Dibbs gave place to an administration presided over by Mr. G. H. Reid. This Government lost no time in introducing new methods of taxation in the form of a Customs Duties Bill and a Land and Income Tax Bill. The Upper House, however, rejected these measures, and the Premier thereupon appealed to the country. The general elections in July confirmed his policy, and in the subsequent Parliament the Bills were again introduced and a second time rejected by the Council. Recourse was, therefore, had to a conference between the two Houses to settle some of the matters in dispute, and the measures shortly afterwards became law. The Government was also successful in passing a Crown Lands Act, introducing the principle of homestead and settlement leases, while a great boon was conferred on the employees in factories and shops by the Factories and Shops Act of 1896. Amongst other important legislation passed during this period was the Public Service Act of 1895, which removed the appointment and promotion of civil servants from the control of the political heads and placed them in the hands of three independent Commissioners, and the Federal Enabling Act of 1896, providing for the representation of New South Wales at the Federal Convention. Sir Robert Duff died in office on the 15th March, 1895, and on the 21st November Viscount Hampden assumed the administration, which he held until the 6th March, 1899. His successor, Earl Beauchamp, took over the duties on the 18th May, 1899.

The Colony lost one of its foremost statesmen in 1896 by the death of Sir Henry Parkes, who had been intimately connected with the destinies of New South Wales from the initiation of Responsible Government, and had been instrumental in placing some of its best legislation on the Statute Book. The deceased statesman had also been one of the chief advocates of Australian Federation.

In its completed form, the Commonwealth Constitution Bill of 1898, although essentially grounded on the Bill of 1891, nevertheless contained some very important alterations and additions, and while it was accepted in Victoria, Tasmania, and South Australia, the result of the referendum of the 3rd June, 1898, showed that a sufficient majority had not been obtained to ensure its acceptance in the parent State. The election in 1899, at which the party led by Mr. Reid was returned to power, had been contested mainly on the Federal issue, but it was recognised that some drastic changes would have to be made in the Federal Constitution before it would be welcomed in New South Wales. The Government thereupon decided to send Mr. Reid to a conference with representatives of the other States, and commissioned him to move a series of resolutions expressing its wishes with regard to the Bill. This Conference met in Melbourne in January, 1899, and after a considerable amount of discussion, both with the Legislature of New South Wales and the representatives of the other States, the Bill was sufficiently amended to please the majority of those interested in its fate, and at a referendum in June, 1899, it was accepted in New South Wales, and shortly afterwards in all the other States, excepting Western Australia. A referendum was not taken in the last-mentioned State until the 31st July, 1900; but the Bill was passed there by the substantial majority of 25,109 votes.

After the disposal of the Federal issue in New South Wales by the referendum of 1899, Mr. Barton resigned the leadership of the Parliamentary Opposition, and was succeeded by Sir W. J. Lyne. This Ministry, in September, 1899, displaced the Government of Mr. G. H. Reid, which had held office for a period of five years, and before the close of the year succeeded in passing some important legislation, the chief measures being the Early Closing Act, Friendly Societies Act, and a Gold Dredging Act. The first contingent of troops to assist the British forces operating in South Africa was also despatched in 1899.

Several important legislative enactments became law in 1900. Foremost amongst these was an Act to provide for Old-age Pensions, more extended reference to which will be found in a later chapter. In addition, measures were passed for the resumption of the Darling Harbour Wharfs, and for placing the control of Port Jackson in the hands of a Harbour Trust. In response to a call for further troops for service in South Africa, three contingents were despatched by the Government, another corps was provided for almost entirely by voluntary subscriptions of citizens, while a body of mounted troops known as the Imperial Bushmen's Contingent was raised by the Imperial authorities. Earl Beauchamp resigned office in November, 1900, and the Government was administered by the Lieutenant-Governor, Sir Frederick Darley, until the end of May, 1902, when the present Governor, Sir H. H. Rawson, arrived.

The Commonwealth Constitution Bill was received with considerable approval by the Imperial Government; but it suggested certain alterations, the most important of which referred to appeals to the Privy Council. After consultation with representatives of the Australian States who were sent to England for the purpose, all difficulties were eventually smoothed away, and the Bill received the Royal Assent on the 9th July, 1900. Lord Hopetoun, who was appointed first Governor-General, arrived in Sydney on the 15th December, and the formal inauguration of the new Commonwealth took place on the 1st January, 1901. The ceremony of swearing-in the first Federal Ministry was conducted in a pavilion erected for the purpose in the Centennial Park, at Sydney, and the festivities in honor of the birth of a Federated Australia lasted for several days, considerable éclat being lent to the proceedings by the presence of picked detachments of troops from Great Britain, India, and the various provinces of Australasia. In connection with the history of the Federation, a melancholy interest attaches to the death of Queen Victoria, which took place on the 22nd January, 1901, from the fact that one of the last public acts of the revered sovereign was the signing of the warrant establishing the Commonwealth.

On the acceptance of a portfolio in the Federal Government by Sir W. J. Lyne, the premiership passed over to Sir John See, whose Ministry dated from the 28th March, 1901. The Industrial Arbitration Act, which was passed by this Government at the close of the year, is one of the most important pieces of democratic legislation ever attempted by any country, and its operations are being studied with the keenest interest both in Australia and abroad. During this year the State contributed further contingents of troops for service in South Africa, and also joined in with the other States of the Commonwealth in the detachments sent away in 1902, furnishing also a naval contingent to aid the British forces operating in China. In May, 1901, after opening the first Federal Parliament in Melbourne, their Royal Highnesses the Prince and Princess of Wales visited Sydney.

The early months of 1902 were marked by a continuance of the drought, with a consequent rise in the price of meat and of agricultural and dairy produce. Wheat production fell away considerably, the yield being over a million bushels less than in the preceding year, while for the season ended March, 1903, the total harvested was only a million and a half bushels. The marvellous recuperative powers of the State were, however, well evidenced by the returns for the following year, when the wheat harvest was considerably over 27,000,000 bushels—the highest ever recorded in the history of New South Wales.

The South Coast district was again the scene of a disastrous colliery accident in 1902, an explosion in the workings of the Mount Kembla Mine in the middle of that year being responsible for the deaths of between 90 and 100 employees.

An important piece of legislation passed in 1902 was the Woman's Franchise Act, which entitles all women of the age of 21 years and upwards to vote, and this right was exercised for the first time at a State election at the general elections of 1904.

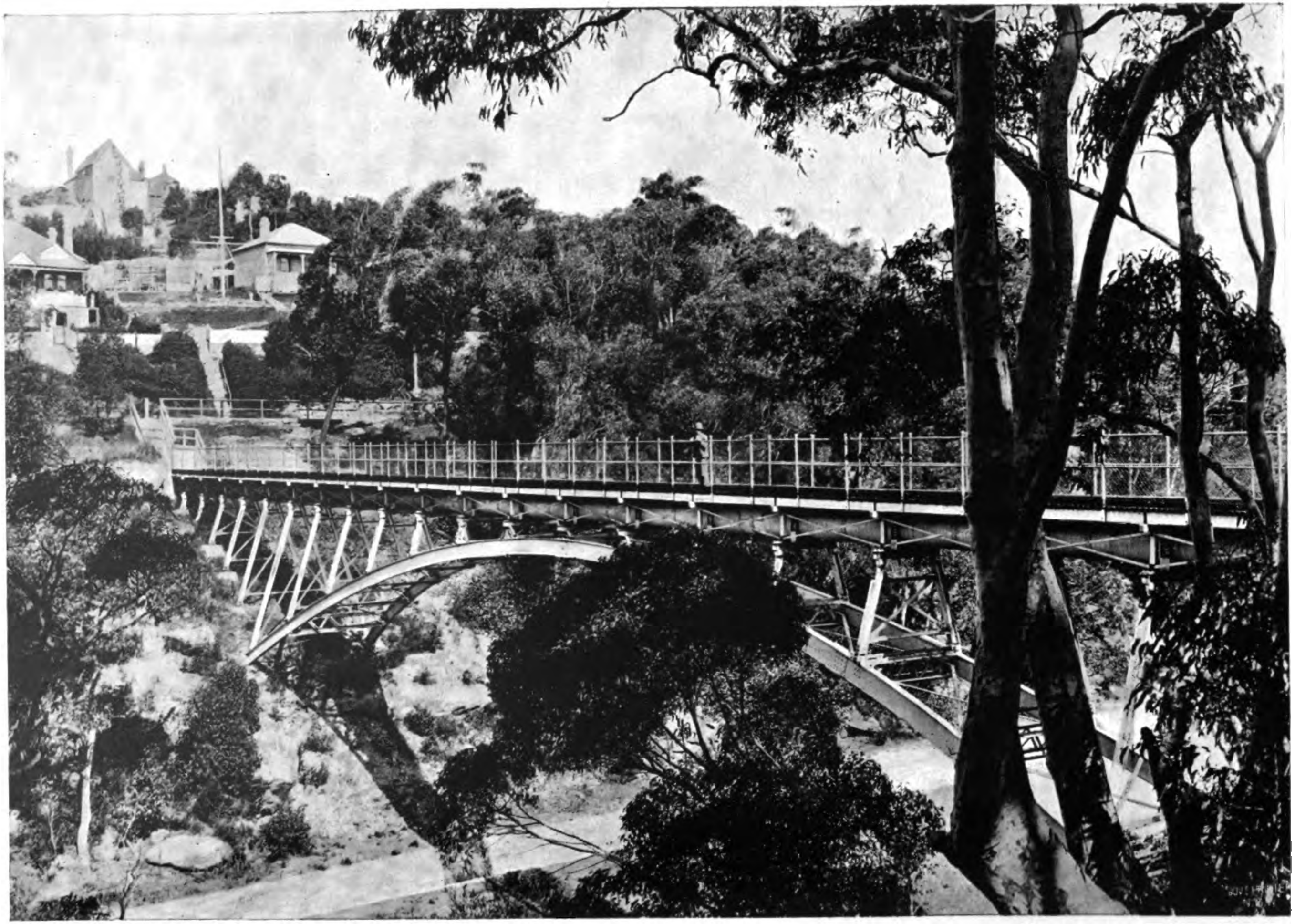
The question of reduction in membership of the Legislative Assembly was discussed in Parliament in 1903, and it was decided that the matter should be submitted to the decision of the electors of the State. At the referendum in December the great majority voted for a reduction to ninety members, and this, of course, necessitated a rearrangement of electorates, a duty which was satisfactorily carried out by a Commission during the course of the following year.

In June, 1904, Sir John See resigned the premiership, and was succeeded by Mr. T. Waddell, whose Ministry was displaced in August by an administration under the leadership of Mr. J. H. Carruthers.

The present Government has introduced a policy of rigid reform and economy in administration. Provision has been made for carrying out a practical scheme of Local Government, and, under instructions received, a Commission mapped out the State into the various municipalities, shires, &c., in accordance with the provisions of a Local Government Bill. This measure received Parliamentary sanction towards the close of the year 1905, and it is believed that the detailed scheme which has been elaborated will result in a more efficient and satisfactory expenditure of the public funds on local works and services. A Local Government Extension Act has been passed conferring increased powers on existing municipalities, especially in regard to rating. The question of settlement has received attention, and it is confidently expected that the Closer Settlement Act and other proposed land legislation will have the effect of adding to the prosperity of the country by increasing settlement on the lands of the State. The Liquor Act of 1905, which became operative in 1906, has already removed many of the abuses in connection with the sale of intoxicating beverages. More extended reference to this measure will be found in the chapter dealing with Law and Crime. Amongst legislation foreshadowed in the Parliamentary session which opened towards the end of June, 1906, one of the most important measures is the proposed creation of a Public Works Fund, which will absorb receipts from the sale of Crown lands. Under the Government Savings Bank Act passed in 1906, the amalgamation of the Bank and the Advances to Settlers Board was effected, thus practically establishing a State Land Bank. A Workmen's Compensation Bill and a Pure Foods Bill are to be brought in, while amending legislation is proposed with regard to the Arbitration Act, and consideration will be given to the question of modifying the Old-age Pensions Act, with a view to lessening the cost of its administration.

One of the most hopeful features in the progress of New South Wales consists in the marvellous development of its agricultural and dairying resources during the last few years. As regards the pastoral industry, of course little need be said, since the State has for long occupied a proud position amongst the world's suppliers of wool. The old-fashioned idea, however, that the bulk of the western district of New South Wales was destined for nothing else than a sheep-walk, has been to a great extent abandoned, for it is found that, with a proper water supply, the soil in this division is in general admirably adapted for the production of wheat of splendid milling qualities. While water conservation and irrigation have as yet advanced but little beyond the pioneer stage, the results have been so eminently satisfactory that the future of the State as a factor in the world's supply of breadstuffs may be viewed with hopeful assurance. Further allusion to these matters will be found in the chapters dealing with the primary industries.

For some time past extracts from the British newspapers would lead to the supposition that a regular campaign of misrepresentation had been initiated against New South Wales, for while these diatribes lay special stress on the fact that the State is subject to occasional droughts, scant attention is paid to its wonderful resources, and to the fact that proportionately to population its production is surpassed by that of few other countries. The present Agent-General and his staff, however, have been taking energetic steps, not only to refute the numerous slanderous assertions, but to present a true picture of the conditions prevailing here, and the best proof of their success lies in the fact that there is now a small but steady stream of immigration setting to these shores. In 1905 an Intelligence Department was established in Sydney, which will help to keep the Agency-General supplied with the latest information bearing on the State, while special attention will be given locally to the question of furnishing reliable and up-to-date particulars to intending settlers and tourists.



MOSMAN'S BAY, SYDNEY HARBOUR.

TOURIST ATTRACTIONS OF NEW SOUTH WALES.

Sydney Harbour.

Sydney Harbour, or Port Jackson, must undoubtedly be reckoned the foremost amongst the attractions of New South Wales. Indeed, taking into consideration the beauty of its scenery in conjunction with its commodiousness and general adaptability for shipping purposes, it probably takes first place amongst the harbours of the world. The great navigator, Captain Cook, was deceived by its comparatively narrow entrance into imagining that the inlet was not worth examining, and it was reserved for Governor Phillip and his little company to be the first white men to sail over its waters. As stated in a previous chapter, the distance between the headlands is only 74 chains, the north head being a remarkably picturesque sandstone bluff over 200 feet in height. Within the heads a glorious panorama presents itself, the blue waters of the harbour spreading out into several lake-like expanses, while the united streams of the Lane Cove and Parramatta Rivers enter it from the west. Picturesquely-wooded slopes offer charming landscape effects, while here and there curving stretches of silver or golden sands line the shores. Entering the harbour, the white tower of the Macquarie Lighthouse is a prominent landmark, the structure being situated a short distance from the extremity of the South Head. The light is considered amongst the finest and most powerful in the world, and permission to inspect its workings may be obtained on application to the Navigation Department. Steamers ply at regular intervals from Circular Quay to the wharf at Watson's Bay, the landing place for visitors to this spot, although, if preferred, a very pleasant journey can be made thereto by road. Splendid sea and harbour views are obtainable from the summit of the cliffs in the vicinity. Directly opposite the harbour entrance stands a bold, rugged promontory, called Middle Head, and its position, as seen by Captain Cook from the deck of the "Endeavour," doubtless led the great navigator to imagine that the port was of insignificant dimensions. To the right, at the head of North Harbour, and distant about 6 miles from Circular Quay, lies Manly Cove, the beautiful little marine suburb of Manly being situated on a narrow tongue of land between the harbour and the ocean. The hills on each side of the town rise to a considerable height, and their verdurous slopes are covered by numerous picturesquely-situated residences. Manly is a favourite holiday resort, and is reached from Sydney by an excellent service of ferry steamers, the journey occupying about forty minutes. There are fine enclosed baths on the harbour side of the township, but, through the increased popularity of beach-bathing, these are practically deserted. All through the year the ocean beaches are thronged with bathers of both sexes, and in summer the temperature of the water is so delightful that one is loth to leave it. Ample provision has been made by the local Municipal Council to ensure the comfort of bathers. Throughout the year the climate of Manly is delightful, the heat in summer being tempered by the cool sea breezes, while the winter season is proverbially mild and enjoyable.

The southern shore of the harbour from the entrance right up to Sydney Cove consists of a succession of beautiful bays. Watson's Bay has already been mentioned. Following it comes Rose Bay, with its crescent-shaped shore backed by gardens filled with luxuriant vegetation. Next there is Double Bay, with Point Piper on its eastern and Darling Point on its western side, followed by Rushcutters and Elizabeth Bays. Round these bays some of the finest residences and gardens in Sydney are situated. Wolloomooloo Bay is next passed, followed by Farm Cove, and the vessel finally turns into Sydney Cove.

Farm Cove is a beautiful horseshoe-shaped inlet, reserved exclusively as an anchorage for the warships. All round the water's edge a substantially-laid sandstone wall has been erected, and behind this there is a splendid promenade, forming the edge of the Botanical Gardens, which cover the sloping ground round the shores of the inlet. On the bright days which are so characteristic of "sunny New South Wales," the beautifully-kept lawns and flower beds, the handsome avenues of decorative trees, and in the foreground the deep blue waters of the bay with the warships at anchor, and the crowds of yachts and sailing craft skimming about all over the harbour, constitute a landscape of unrivalled charm. The Gardens contain some splendid samples of Australian flora, and care has been taken to add to the interest and value of the collection by grouping the various classes to the best advantage.

The Middle Harbour branch of Port Jackson contains an area of about 8 square miles. It has been described as a Port Jackson in miniature, and well deserves the title, but with this addition, that the natural beauty of its surroundings has been little interfered with by the progress of settlement. Steamers enter this arm of the harbour round the north of Middle Head, the channel being very narrow owing to the presence of a long sand-bar, called "The Spit." A few days may well be spent in exploring the beauties of its charming bays and rugged well-wooded shores.

The picturesque Lane Cove and Parramatta Rivers, which come in from the west, are in reality prolongations of the harbour itself, the fresh water portions of both being comparatively insignificant. Fast and commodious steamers touch at the chief points of interest in each at regular intervals daily. The Parramatta has achieved a world-wide reputation as the scene of many contests for the sculling championship of the world.

Favoured as Sydney is with a splendid climate, and possessing a harbour of such noble proportions, it is only natural that sailing and rowing should be great pastimes amongst its inhabitants. There are two yacht clubs, and numerous other sailing clubs; and in the summer season the waters of the port present an animated and beautiful sight. The visitor who is a sailing enthusiast will have no difficulty in procuring a craft to suit his purpose at the numerous boatsheds, while motor boats, steam launches and rowing boats of all descriptions are also available.

Excellent fishing may be had anywhere in the harbour, as well as outside. Black and red bream, squire, trevally, mackerel, &c., are taken in the harbour almost all the year round. On the ocean side fine fish are caught from the rocks and beaches, such as schnapper, groper, red and black rock cod, jewfish, rainbow fish, parrot fish, and many others. The sea is generally so calm that it is possible to row out to some of the schnapper fishing grounds, where good sport is obtainable. More distant grounds up and down the coast are visited by steamers, regular trips being made in the winter season.

THE BLUE MOUNTAINS.

The inhabitants of Sydney are most fortunately situated, in that there are such a number of places within easy distance of the city remarkable alike for their salubrity as for their scenic charm. For example, the township of Katoomba—which is 3,350 feet above sea-level, and generally regarded as the most central spot from which excursions may be planned to the various sights on the Blue Mountains—is only 66 miles from the metropolis. The cheapness of the railway fare and the very reasonable charges for accommodation bring a holiday on the mountains within the compass of persons possessing very moderate incomes.

Leaving Sydney by the Western or Blue Mountain train, the first important stop is made at Penrith, 34 miles from the metropolis. The town, which is the centre of the beautiful and fertile Emu Plains district, is situated close to the eastern bank of the Nepean River, which the railway crosses on a fine iron bridge. Immediately after leaving the river the line begins to ascend, and on hot days the traveller cannot fail to notice the agreeable change in temperature, coupled with the invigorating freshness of the rarer mountain air. Prior to entering the Lapstone Tunnel, a glorious view is obtained of the Emu Plains, shimmering in the summer haze hundreds of feet below. Here and there the varying shades of green mark cultivation patches, while the course of the Nepean winds in and out through the landscape like a silver ribbon. After emerging from the Lapstone Tunnel the first mountain station touched at is Glenbrook, a favourite resort of persons in need of rest and quiet after fatiguing labours in the metropolis. Then follow various small stations such as Springwood, Lawson, Wentworth Falls, &c., and finally Katoomba is reached after a journey of less than three hours. The tourist will have no difficulty in securing suitable accommodation close to the railway station, or if preferred, comfortable lodgings may be had at places nearer to the chief points of interest. It may here be mentioned, also, that furnished cottages can be had on very reasonable terms at any of the mountain resorts.

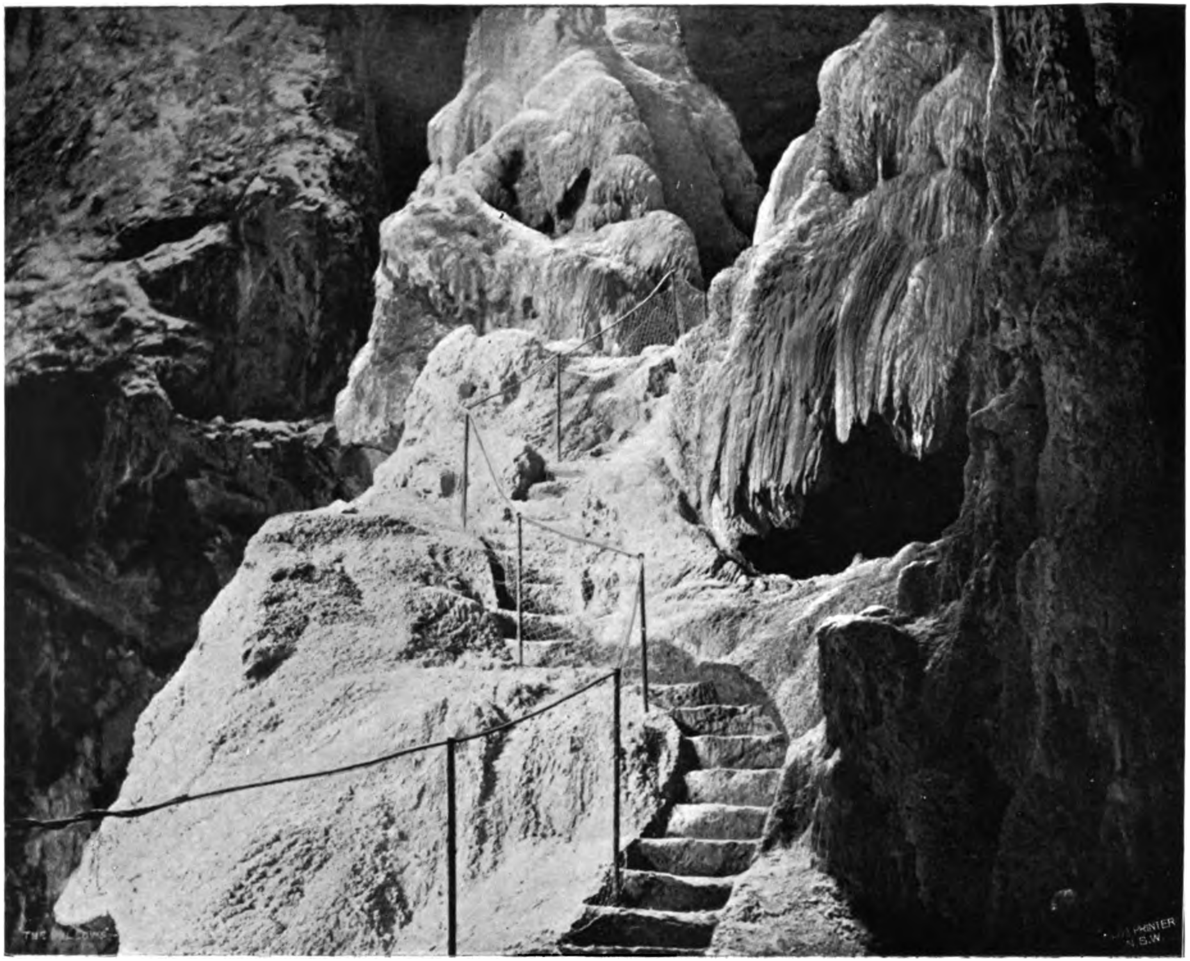
The first view of the mountains from the window of a railway carriage is rather disappointing; while at Katoomba, one's preconceived ideas regarding mountain scenery are somewhat upset by the fact that to visit the best sights one has to travel downhill. This, of course, is due to the circumstance that the railway station is situated at about the highest point of the surrounding plateau. Moreover, the stunted eucalyptus forest lends rather a monotonous aspect to the landscape on the way to the chief view points. But when one reaches such a vantage-ground as the head of Leura Falls, a scene of titanic grandeur presents itself, and the sight from the rocky platform is at once beautiful and awe-inspiring. The Tableland appears to have been rent into frightful chasms by some mighty convulsive force. From the edge of the lookout the spectator gazes down on to the floor of the gorge, a sheer 2,000 feet below. On either side the sandstone precipices rise up almost as straight as walls. To the left the waters of Leura Falls spread out in a silvery mist, through which the rocks behind gleam in lovely opalescent tints of brown and green. The tops of the giant forest trees deep down in the Kanimbla Valley stretch away in a carpet of living green as far as the eye can reach. On clear days the distances are softened by a curtain of delicate blue haze, and the appropriateness of the name of Blue Mountains is thereby vividly brought home to the observer. An easy descent is possible into the semi-gloom at the bottom of this wonderful chasm, where even on the hottest days the air is refreshingly cool. From the foot of the Leura Falls a path has been cut through the forest right round to the Katoomba Falls, through scenes of entrancing loveliness. At times the way leads through avenues of tree-ferns, whose fronds interlacing overhead produce a sort of twilight, while here and there the sun peeps through and decks the earthen floor with tracery of gold. Anon, a cavern with dripping sides is traversed, while, nearing Katoomba Falls, the path comes close to the face of the precipice, whence, gazing upward, the traveller obtains a far better idea of its majestic proportions than is possible from above. The authorities take all sorts of care that none of the beauties of this wonderful scenery shall be destroyed, so that the typical Australian ferns and wild flowers may here be seen in all their native worth. As is the case at other points of interest, pure cool water is everywhere abundant, while here and there fireplaces have been provided, and wood cut ready for the visitor to make his "billy" tea.

Space will not permit of more than a passing reference to the numerous other interesting and beautiful views within easy reach of Katoomba. The Minnehaha Falls are situated about halfway between the township and Wentworth, and by some observers are considered the most picturesque falls on the mountains. Then there are the famous Wentworth Falls, which may be reached in the course of a few hours' drive by an excellent road from Katoomba, or, if preferred, the visitor can go by train to Wentworth Falls station, from which the lookout is only about a mile and a half distant. An exceptionally fine view is obtained at Govett's Leap, 2 miles from Blackheath, where the waters of a creek flow over the edge of a precipice on to a ledge 520 feet below. Deep down in the gorge, the bottom of which is 1,200 feet from the summit of the surrounding cliffs, a line of brighter green in the foliage of the trees marks the course of the Grose River.

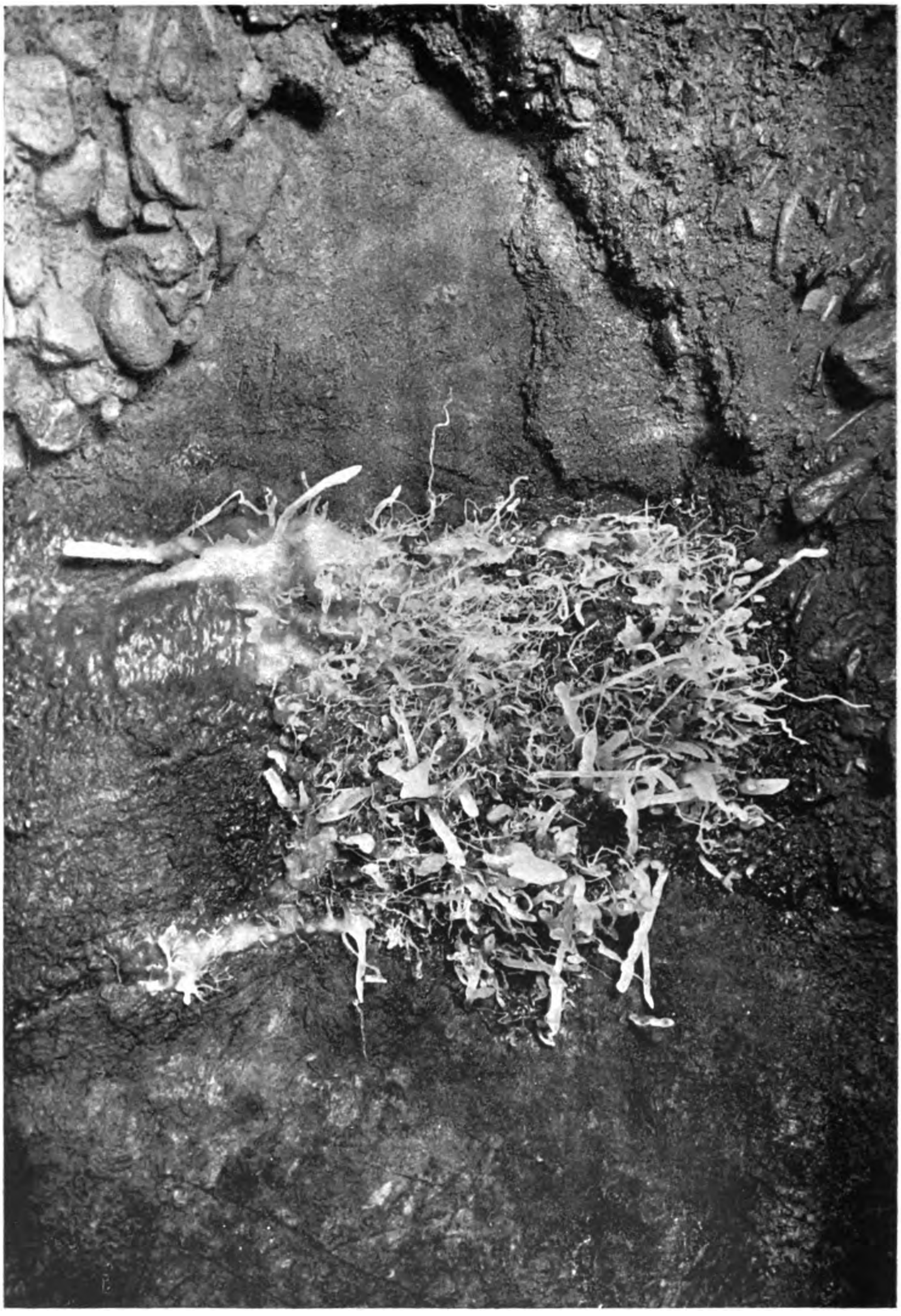
The foregoing brief description by no means exhausts the list of the beauty spots on the Blue Mountains. Near all the stations on the Western line, from Glenbrook up to Mount Victoria and across the range to Lithgow, there are numerous attractive views, all well worthy of a visit.

THE JENOLAN CAVES.

Tourists who have travelled far in many lands pronounce the Jenolan Caves to be superior in beauty and variety of formation to those of any other country in the world. The visitor has a choice of several routes to the Caves, but the most convenient is by way of Mount Victoria, distant about 35 miles. Including stoppages, the journey by coach takes about six hours, but there are also motor-cars running which accomplish the distance in about half that time. The trip through the clear mountain air is a most exhilarating one, and at several points superb views are obtained. Before reaching the Caves House—a splendid building erected by Government for the accommodation of tourists—the road passes through the Grand Arch, an irregular tunnel about 200 feet broad and 70 feet high, which pierces portion of the limestone belt in which the caves are situated. The aborigines of the district knew the caves and surrounding ridges under the name of Binoomea, but the first white man to discover them was a bushranger named McKeown, who used one of the small caves as a hiding-place. McKeown's retreat was discovered in 1841 by a man named Whalan, who subsequently assisted the police to capture the bushranger. From this time forward the caves began to attract attention, being first called the Bindo Caves. The present name, Jenolan (high mountain), was given to them by proclamation in the *Government Gazette* of the 10th August, 1884. Prior to 1866 there was no official caretaker to protect the caves from the vandalism of visitors. Since that date, however, the Legislature has spent large sums of money in improving the approaches, making paths, and providing electric-light and other appliances, whereby the great natural beauties of the caves can be seen to most advantage. Space will not permit of any lengthened reference to the marvellously beautiful stalactites, stalagmites, shawls, cascades, jewel caskets, &c., in which the various caves abound, and, moreover, any written description would utterly fail to convey an



JENOLAN CAVES.



JENOLAN CAVES "MYSTERIES."

adequate idea of the many and varied beauties to be found therein. It may be mentioned here that it is quite possible for the visitor to see some of the finest sights in the caves without going to the trouble to change his ordinary attire, as the floors are beautifully clean and dry.

Some very pleasant excursions may be made in the district immediately surrounding the Caves House. The Government has set apart about 6,000 acres for a reserve, and here the wallabies and other denizens of the bush are allowed to roam unmolested.

THE YARRANGOBILLY CAVES.

These caves, which are considered by some to rival in beauty the far-famed Jenolan Caves, are easily accessible from Cooma or Tumut. The entrances are in the side of a hill, commanding a splendid view over a fine, well-watered valley. Formations may be seen in the caves of infinite variety of shape and hue, and fresh beauties are being unveiled by further explorations. Splendid trout fishing can be obtained in the rivers in this locality.

THE SOUTH COAST DISTRICT.

The South Coast district is one of the most beautiful and fertile portions of the State of New South Wales. Here the Southern Tableland approaches very closely to the sea coast, and, in fact, at Clifton the mountains rise almost sheer from the water's edge. Beyond this point, however, the tableland retreats inland, but even so far south as the Shoalhaven River it is never more than about 8 miles from the sea. From Clifton downward, practically the whole of this strip of country is of marvellous fertility, while rich coal-seams occur throughout the entire extent of the seaward face of the tableland. The district contains some of the best dairying land in the world, its lush meadows being intersected by numerous beautiful little fern-fringed creeks hurrying with their sparkling tribute from the mountains to the sea. From the numerous view-points on the edge of the tableland, enchanting vistas of mountain, lake, and ocean scenery are discernible. At each of the little villages along the railway line, the tourist may vary the pleasures of sea-bathing with mountaineering, and in the lakes and off the coast excellent fishing abounds, while the sportsman may hunt wallabies in the ranges, or exercise his marksmanship on the parrots, wood-pigeons, pheasants, and other feathered denizens of the mountain jungles. During the daytime the summer heat is tempered by the cool breeze blowing in over the wide expanse of the Pacific Ocean, while after sundown soft airs impregnated with faint scents of eucalyptus, musk, and wild lavender are wafted down from the mountains.

The first portion of the journey from Sydney is made through very uninteresting country, and it is not until the line reaches Stanwell Park that the typical beauty of the South Coast scenery begins to assert itself. Of the intervening stations, however, mention might be made of Como, where the railway crosses the estuary of George's River—a favourite fishing-ground—and Sutherland, where passengers disembark who wish to view the natural beauties of the National Park. Despite their general air of dreariness, the stony ridges in this first stage of the journey are brightened at certain seasons by a wealth of native flowers, the most remarkable amongst these being the wild tulip, whose fiery red bloom is produced on a thick straight stalk often as much as 8 feet in height.

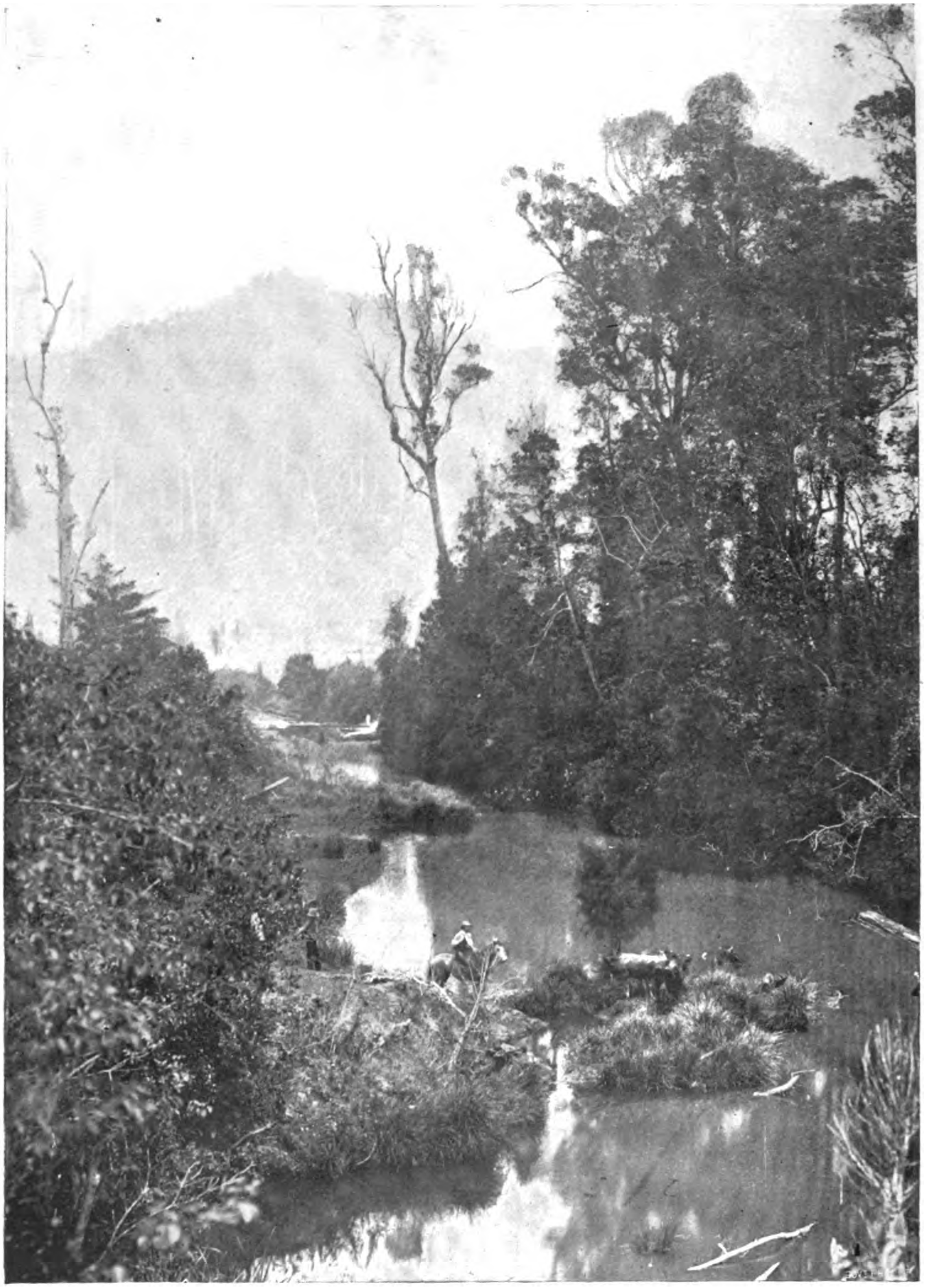
At Stanwell Park beautiful views of ocean and mountain abound, and from the rocks on the sea coast good fishing is obtained. The amateur photographer here finds many a charming subject for his camera, the steep mountain sides forming an effective background to the palms and other tropical vegetation characterising the seaward slopes. Endless attractions also are offered to the botanist by the profusion of ferns and wild flowers of remarkable variety and beauty. Passing Clifton and Scarborough, where the line runs along the edge of the cliffs hundreds of feet above the sea, the little station of Thirroul is reached, the nearest point on the railway line to the famous Bulli Pass. Although the township is very small, there are several excellent accommodation houses, with a very reasonable tariff. If preferred, the tourist may go on to Bulli, a couple of miles further south, where there are several good hotels, in addition to numerous private boarding-houses. At both places there are beautiful beaches within a few minutes' walk of the town, while conveyances can be hired for a nominal sum to take visitors to the Pass and make expeditions to other points of interest in the surrounding district. The road to the Pass is a very good one, and, despite its steepness, the atmosphere is so pure and fresh, and the luxuriant forest affords such delightful shade, that one can accomplish the journey on foot with ease and pleasure. From the outlook on the edge of the plateau at the summit the view beggars description. David Christie Murray, the eminent novelist, remarks in connection with it, that "No word-painter ever lived who could actually convey to another the image of everything he had seen." Here, as at the Blue Mountains, one sees bare cliffs towering straight up like walls, surrounded at the base by a billowy sea of verdure. But the green of the Blue Mountain valleys, as seen from above, is generally of the one monotonous tint, whereas at Bulli the foliage is of great variety and beauty. Moreover, from the Pass there is a glorious view of the Pacific Ocean, the landscape taking in 30 or 40 miles of coastline. The waves can be seen dashing on many a rocky promontory, or curling in feathery spray on the golden sands of the beaches, but no sound of "sighing and moaning" reaches the ears of the spectator. South of Wollongong, the graceful outlines of the Five Islands can be clearly distinguished, while in the far distance the turquoise tints of Lake Illawarra flash and sparkle in the sun. Leaving Bulli the line proceeds southward, still in close proximity to the coast. Wollongong is the next stopping-place, and the town, which is of considerable size, is surrounded by fine scenery. Many pleasant excursions can be made to Mount Keira and other view-points within easy distance of the town, and the visitor may enjoy the delights of sea-bathing in the comfortable municipal baths or on the long stretches of beautiful sandy beach. Between Dapto and Albion Park the railway skirts the shores of Lake Illawarra, where good fishing and shooting are generally obtainable. Several of the islands in the lake are noted for the beauty and variety of the vegetation which covers them. At Shellharbour, 66 miles from Sydney, the fisherman generally may rely upon having excellent sport, and the lovely beaches near the town make it a most attractive seaside resort. Kiama, 71 miles from Sydney, is most picturesquely situated on the gently undulating slopes of a hill, rising in places to a considerable elevation above sea-level. Prior to entering the town the line runs for some distance along the edge of a beautiful sandy beach, and on sunny days and bright moonlight nights the scene from the carriage windows is of enchanting beauty. Amongst the principal attractions of Kiama may be mentioned the famous "Blowhole," discovered by Bass in 1797. This natural curiosity consists of a passage bored out by the sea through a fault or soft dyke in the volcanic rocks, on the southern side of the harbour. At the landward extremity the opening bends abruptly upwards, and during heavy weather the waves are forced through the vent and break forth in hissing and booming geyser-like clouds of spray and foam, which rise to a considerable height. Between Kiama and the terminus of the South Coast railway at Nowra the line passes through rich lands given over almost exclusively to dairy farming, and the beautiful grass-grown meadows are not only found on the plain, but here and there the mountain sides have been cleared and turned into sweet pastures. The railway ends at the little station of Bomaderry, close to the north bank of the Shoalhaven; but the town of Nowra is situated some distance away on the other side of the river, which is spanned by a splendid steel bridge of very graceful design. During the season excursion steamers make weekly trips up and down stream alternately. In its lower course the river passes through alluvial flats of great fertility, and the scenery is in marvellous contrast to the ruggedness characteristic of the upper reaches, where at times the stream flows through gorges over 1,000 feet deep. Conveyances can be hired at very moderate rates to take visitors to several places of interest within easy reach of the town. A few miles to the south of the Shoalhaven entrance lies the splendid inlet called Jervis Bay, a favourite fishing and camping ground. Further down, good fishing is also obtainable at times at the picturesque St. George's Basin. Moreover, some of the smaller streams in the district have been stocked with trout ova, and fish of fair size have been taken in them. One of the finest views in the State can be obtained from the summit of Cambewarra Pass, on the road from Nowra to Kangaroo Valley and Moss Vale. The outlook takes in a large portion of the course of the Shoalhaven River and Broughton Creek, and of the wild mountain ranges in which they have their sources. Jervis Bay and St. George's Basin are clearly discernible, while the foreground is filled with the glistening deep blue waters of the Pacific Ocean. The vegetation on the Cambewarra Mountains is of great variety and beauty of foliage and flower. One of the handsomest trees is the giant stinging tree, whose graceful foliage is more pleasant to the sight than to the touch, for the unwary traveller who has once grasped its leaves will not be in a hurry to renew the experience. Then there is the wild fig, whose trunk spreads out at the base into most fantastic shapes, while its wide-spreading limbs, covered with their glossy dark green leaves, afford a cool umbrageous shelter that even the fiercest noonday sun fails to pierce. The cedar, the tamarind, the pencil, and the sassafras are also magnificent trees—the bark of the latter, when freshly cut, giving off a most delightful perfume. Sweet odours are also exhaled by the leaves of several other trees and shrubs growing hereabouts, such as the musk tree and wild lavender bush. In the creeks and gullies there is endless profusion of palms and ferns of wonderful grace and beauty.

THE NORTHERN LINE.

The first section of the Great Northern Line commences at Sydney, and runs north by east in close proximity to the coast as far as Newcastle. From the latter city the railway takes a turn westward, although still preserving its northerly course, as far as Werris Creek Junction. Here the line sweeps round to the north-east till it reaches Walcha, and thenceforward runs almost parallel to the coast, but at a distance of about 95 miles from it, until it crosses the border into Queensland, at Wallangarra. Thirty-six miles from Sydney the Hawkesbury River is crossed by a magnificent seven-spanned iron bridge, resting on caissons whose foundations vary in depth from 100 to 162 feet. Under the name of Nepean, the tourist crosses the same stream near Penrith, on the way to the Blue Mountains; but the wild and rugged grandeur of the scenery on the Lower Hawkesbury is in marked contrast to the calm, peaceful beauty of the reaches on the Nepean. An extract from Anthony Trollope's remarks concerning the scenery on the river reads thus: "For continued scenery the Rhine stands first. There is a river, or rather a portion of a river, known to very few tourists, which, I think, beats the Rhine. This is the Upper Mississippi for about 150 miles below St. Paul's. It is not my business here to describe the Mississippi, but I mention it with the object of saying that, in my opinion, the Hawkesbury beats the Mississippi." Steamers run regularly up and down the river, while there are scores of rowing boats available for hire on very easy terms. Probably the best way for the tourist to enjoy the scenic beauties of this magnificent stream would be to hire a boat, take a light camping outfit, and spend a few days in exploration. It is a well-known fact that New South Wales offers ideal conditions for camping out; indeed, for a large portion of the year it is quite safe to sleep in the open, with no covering whatever. By taking a boat, the tourist will be able to visit many places of interest out of the ordinary beaten track, such as the numerous rock caverns, some of which are decorated with ancient aboriginal drawings. Then, again, the botanist will find, on some of the ridges near the river, a marvellous wealth of wild flowers of wonderful form and hue. The sportsman also can make sure of having plenty of opportunities for trying his marksmanship on the rock wallabies, which here abound; while, in the season, flocks of gillbirds visit the district to feed on the honey from the forest flowers. As regards fishing, it is, by common consent, acknowledged that the Hawkesbury and its tributaries constitute one of the finest fishing grounds within easy reach of the metropolis. Some of the creeks running into the Hawkesbury are of remarkable beauty, their bright blue waters and golden beaches standing out in marked and effective contrast to the dark green of the wooded hills surrounding them. Cowan Creek is one of the best known of these, and is most easily reached from Berowra station, 28 miles from Sydney. In addition to the accommodation provided on land, there are on the creek several roomy and comfortable house-boats available for hire on reasonable terms. Woy Woy, 45 miles, Point Clare, 48 miles, and Gosford, 50 miles from Sydney, are well-known fishing resorts, distinguished for the comfort and cheapness of the accommodation that can be secured at them. The Tuggerah Lakes, 61 miles from Sydney, are much resorted to during the season, ideal spots for camping being found on their shores. Fine fishing is obtainable on the lakes, as well as in the Wyong Creek, which drains into them. At certain seasons, black swan, ducks, pelican, curlew, snipe, pigeons, and gillbirds may be shot on the lakes and creeks, and in the district surrounding them. The tourist who wishes to visit Lake Macquarie leaves the train at Fassifern, 88 miles from Sydney, whence a tram will convey him to the lake shore. This beautiful expanse is not so well-known to Sydney residents as it deserves to be, although it is a popular resort for picnic parties from Newcastle.

The first portion of the line from Newcastle northwards traverses the Hunter River Valley, and no one who has failed to visit this wonderful district is qualified to express an opinion on the resources of New South Wales. The lower portion of this region comprises within its limits one of the richest and most productive coalfields in the world, while the broad alluvial flats of the Hunter Basin can produce unrivalled crops of lucerne, maize, potatoes, grapes, and various other crops.

Leaving Maitland, 20 miles from the sea, the line passes through some of the best wine-producing land in the State, at Lochinvar, Allandale, and Branxton. Near Scone the picturesque Mount Wingen can be seen. This is a burning mountain, but not a volcano, the smoke rising from its crest being caused by the smouldering coal-seams deep within its bosom, which have been alight since long before the advent of the white man to Australia. There is some steep climbing between Moonbi, 1,400 feet above the sea, and Woolbrook, only 16 miles further on, where an elevation of 3,000 feet is reached, the route passing through scenery impressive



BRUNSWICK RIVER NORTH COAST DISTRICT.

in its rugged grandeur. The highest point in the railway system of the State is attained at Ben Lomond, 4,500 feet above sea level, and distant 401 miles from Sydney. Thenceforward there are about 90 miles of the tableland to be traversed before crossing the border to Wallangarra.

The narrow strip of country between the northern tableland and the sea contains some of the finest scenery and most productive soil in the whole of Australia. In the Tweed River Basin are to be found areas of splendid country, growing rich crops of sugar-cane and maize, or occupied by thriving dairy farms, won from the almost impenetrable fastnesses of the Big Scrub, while in the majestic forests, carpeted with profuse growth of ferns of wondrous beauty, there are magnificent timber trees—the teak, the pine, the tallow-wood, the cedar, the rosewood, the red bean, and many others of gigantic size and handsome foliage. This district can be reached by steamer from Sydney, but is more easily accessible from Brisbane. Then there is the thickly timbered Don Dorrigo, now open for selection, which can be reached by a good road from Armidale, distant about 80 miles. Round the head waters of some of the northern coastal rivers there is a wealth of lovely scenery. The Apsley Falls, on the Apsley River, which drains into the Macleay, are of matchless beauty. A good road from Walcha, 10 miles away, conducts the visitor to the principal fall, which is about 300 feet in height. Oxley describes the gorge through which the Apsley flows as being, in places, as much as 3,000 feet in depth.

The marvellous development of dairy-farming in the North Coast District is alluded to in another chapter. Some of the towns on these northern rivers, such as Grafton, on the Clarence, are laid out with wonderful picturesqueness, and the visitor who desires to know something of the capabilities of the State should not fail to include a trip to the North Coast in his itinerary.

THE SOUTHERN LINE.

Many of the resorts on the Southern Line are famed for their salubrity, as well as for the beauty of the scenery in their vicinity. Thirty-four miles from Sydney lies the old-fashioned town of Campbelltown, the centre of a rich dairying district. A very pleasant trip can be made from this point by way of the quaint little village of Appin to the Loddon Falls, and thence over the Bulli Pass to the South Coast Railway Line. About 8 miles westward from Campbelltown, and close to the placid waters of the Upper Nepean, the beautiful little township of Camden is situated. The surrounding district, which is remarkably salubrious, possesses historic interest from the fact that the first Australian attempts at wool-growing and viticulture were made there. Good shooting may be had within easy distance of the town. Picton, 53 miles from Sydney, is charmingly situated in a basin formed by the surrounding hills. One of the best sights within easy distance of the town is the famous "sunken" Burragorang Valley, hollowed out by the slow but irresistible agency of running water to a depth of over 2,000 feet. Along the bottom of the valley flow the crystal waters of the Wollondilly. Mittagong 77 miles, Bowral 80 miles, and Moss Vale 86 miles from Sydney, are amongst the most frequented health resorts in the State. The Southern Tableland is noted for its pleasant climate, and at the above-mentioned places it is as near perfection as could well be wished. Although the surrounding country does not possess the weird ruggedness of the Blue Mountains, there is nevertheless some very beautiful, if quieter, scenery to be met with. From each of the three towns it is possible to reach the South Coast Railway at Kiama—by way of Robertson and Jamberoo, or at Albion Park or Dapto, by coming down through the picturesque Macquarie Pass. Competent judges have pronounced the scenery in the Macquarie Pass to be equal, if not superior, to that at the famous Bulli Pass. The following places of interest, all well worthy of a visit, may be reached by good roads from Moss Vale, the distances being as follows:—Fitzroy and Meryla Falls, 10 miles; Belmore Falls, 22 miles; Carrington Falls, 21 miles; Macquarie Pass, 19 miles; Kangaroo Valley, 22 miles. A day might very well be spent in making the trip from Moss Vale to Nowra, a distance of 38 miles, the road passing through splendid mountain scenery, while in the final stage of the journey glorious panoramic views are obtainable of the ocean and the adjacent fertile coastal districts. Bundanoon, 95 miles from Sydney, is another much-favoured health resort, its climate being reputed to have great restorative effects in the case of persons convalescing after serious illness. There is some very fine scenery in the Bundanoon gullies, within a short distance of the railway station. Marulan is a quiet little spot 114 miles from Sydney, and not far from the wild and picturesque gorges of the Upper Shoalhaven. There are good roads for driving in the surrounding district, while the sportsman will find plenty of hares and wallabies to exercise his markmanship on. The tourist who wishes to see some of the finest pastoral land in the world will proceed by branch line from Goulburn to Cooma, the centre of the rich Monaro district. On the way, Lake Bathurst is passed near Tarago, and between Fairy Meadow and Bungendore a glimpse may be obtained of Lake George—the largest lake in the State. In favourable seasons the lake shores are excellent camping grounds, while good shooting can be had on its waters and in the surrounding country. Cooma, 3,000 feet above sea-level, possesses a delightful summer climate, but the winter season is sometimes extremely cold. From Mount Gladstone, 3 miles away, a fine comprehensive view may be had, embracing a large portion of the Southern Tableland; and in the violet distance far to the southward, the snow-clad summit of Mount Kosciusko may be picked out from amongst the dim shapes of the surrounding mountains.

Several interesting tourist trips may be made from Cooma. The Yarrangobilly Caves, elsewhere alluded to, are 65 miles distant by a road passing north-west through Adaminaby and Kiandra. The latter town, distant 316 miles from Sydney, and situated at an elevation of 4,640 feet above the level of the sea, enjoys the reputation of possessing the coldest winter season in the State. Snow-shoe and toboggan races are held here annually, and attract visitors from all over Australia. Cooma is also the starting-point for expeditions to Kosciusko, 60 miles distant, the highest mountain in Australia. The route lies by way of Jindabyne, in the valley of the Snowy River, whence it is possible to ride the remaining 25 miles to the summit.

Kosciusko, which was so named by Count Strzelecki in 1840, reaches an altitude of 7,300 feet, and is probably the denuded remnant of an ancient peak which towered up to a far greater height. Snow lies on the topmost points of the Muniong Ranges for six months of the year, and, although Kosciusko's rounded summit is 700 feet below the line of perpetual snow, it is no uncommon occurrence to find snowdrifts in its sheltered hollows even in the height of summer. Several lakelets or tarns are situated on the highest slopes, and in their icy waters a species of trout is found that is met with nowhere else in Australia. From the top of Kosciusko a view of marvellous panoramic grandeur unfolds itself. To the eastward one sees the rich Monaro Plains and the far-distant coastal ranges; westward, the outlook takes in the Upper Murray valley; to the north the wild, rugged grandeur of the Snowy River Valley presents itself, while southward the landscape embraces the mountain ranges on the boundary of the State, as well as a considerable area of the Gippsland district in Victoria. Geologists state that the Kosciusko Plateau is probably one of the oldest land surfaces in the world. As one writer remarks: "It was standing high and dry in the full strength of mountainhood when in recent geological time a deep sea extended through central Australia, and washed against the present foothills of Eastern Australia, when Tasmania was still joined to the mainland, and when thousands of feet of deep blue waters covered the rugged shoulders of the Alps and Himalayas."

Splendid trout fishing is obtainable in the waters of the Snowy River, and fishing enthusiasts from the Old Country have declared that the sport far surpasses anything they have been accustomed to in England. From Adaminaby to Kiandra Crossing there is a stretch of 30 miles on the Eucumbene River, where trout of fine size and great fighting capacity have been taken. Good fishing can also be had in the upper waters of the Murrumbidgee and its tributaries. The trout is fast multiplying in several of the western rivers and in the upper waters of the coastal streams.

The somewhat cursory descriptions given above refer only to the tableland and coastal areas of the State. Space will not permit of any detailed reference to the Great Western Plain district, and especially to the extremely productive south-east portion of it known as Riverina; but detailed information on the subject may be obtained from the Tourists' Bureau. This branch of the Intelligence Department arranges periodical trips to the numerous places of interest in the State, and intending visitors would find it greatly to their advantage to consult the Bureau before making their plans.

New South Wales is a vast country, possessing such varied resources of climate and scenery that the tourist who passes merely along the beaten track cannot hope to form an adequate conception of its potentialities. Writers such as Anthony Trollope and David Christie Murray have given more glowing descriptions of certain aspects than the occasion perhaps warranted; while on the other hand some people seem to have gone out of their way to paint the State in the darkest colours possible. The truth, of course, lies somewhere in between, and only those who have lived and travelled in the country for some years can arrive at it.

EDUCATION.

The Educational Revival.

Interest in educational matters has undoubtedly undergone a marked revival in the course of the last few years throughout the whole of Australasia. In New South Wales, even as late as the year 1902, it was confidently asserted that the prevailing system of State education was amongst the finest in the world, and it was not without some difficulty that its upholders were compelled to acknowledge that in many respects the State lagged far behind in the race for educational progress. In 1902 a Commission was appointed to inquire into and report upon the methods of instruction pursued in the chief continental countries, and in America and Great Britain. The first portion of the Report of this Commission was presented in 1903, and several drastic changes in the system in vogue here were therein advocated. The need for reform was immediately recognised, but while from financial and other reasons the recommendations of the Commissioners cannot for some time be carried out in their entirety, the system is being gradually moulded in conformity with them.

The abolition or modification of the pupil-teacher system is amongst the foremost of the changes foreshadowed. While a large proportion of the pupil-teachers have done and continue to do good work, it is manifestly absurd to expect the best results from a system which entrusts the teaching of children to young people who, in addition to being untrained, are not very highly educated. In many instances, these pupil-teachers were placed in charge of junior or infant classes, under the mistaken idea that lack of skill did not so much matter there. Fortunately, however, it has come to be recognised that it is the initial stages of education that call for the best and most scientific teaching, and with this end in view efforts are being put forward in the direction of ensuring that all infant-school teachers shall possess a thorough theoretical and practical acquaintance with kindergarten principles.

Throughout the whole school system strenuous attention is now being devoted to improvement in methods, to substitution of the concrete for the abstract, and to the interlinking and correlation of the various subjects of study. The mere imparting of facts is looked upon as entirely subsidiary to the development of the self-activity of the pupil. Greater stress is laid upon the cultivation of the powers of observation. In this connection the old style of so-called object-lessons is to be in great measure replaced by courses of Nature-study, and the actual environment of the child itself is to be more frequently utilised as an educative factor. The teaching of manual subjects has been entirely revolutionised and brought more into accordance with modern ideas.

Naturally, the inauguration of this "new education" is beset with a considerable amount of difficulty. In the first place, the teachers themselves have to be educated in order to give effect to it. As regards the metropolis, much has already been done through the aid of lectures and practical demonstrations by experts, while the inauguration of vacation classes provides the means whereby country teachers are enabled to gain some insight into subjects and methods of instruction in which they feel they are at present deficient.

The importance of a widely-diffused knowledge of agriculture to a young country like New South Wales has been recognised by the Education

Authorities, and a Director of School Agriculture has been appointed, who will visit schools and districts to give practical instruction in elementary agriculture to both teachers and students. In addition, rural camps are established from time to time, at which boys from metropolitan schools are accommodated for a short period at a nominal expense, and such excursions are planned as will enable them to gain an insight into the practical working of the farms, dairies, &c., in the vicinity, and to acquire a knowledge of the importance of the agricultural, pastoral, and other primary producing industries.

The Hawkesbury Agricultural College also conducts vacation classes for teachers, while interesting series of lectures and demonstrations have been given to metropolitan teachers by experts at the University, Technical College, Australian Museum, and other scientific institutions. It is pleasing to note that business firms in the city and country have on various occasions manifested their interest in the new educational methods by allowing parties of school children and teachers to visit their works, where the processes of manufacture have been explained to them.

Coincident with the change or improvement in regard to methods of teaching, the duties of inspectors have been entirely remodelled. Under the old system, the inspector was little more than an examining officer. So much time was taken up in asking questions, and recording percentages of correct replies, that the inspector had but scant opportunity of inquiring into methods, and estimating the true educative value of the teaching given. In accordance with the new arrangements, however, the inspector's principal duty will be to co-operate with and advise the teachers in order to give effect to the true spirit of the syllabus—the production of good citizens.

THE RISE OF THE STATE SCHOOL SYSTEM.

In the early years of the history of the State, education was almost entirely denominational, the Government granting subsidies to the various religious bodies in proportion to the amounts expended by them on this service. This arrangement was, however, not universally satisfactory, for as early as 1839 a grant was obtained for the purpose of subsidising schools free from denominational influence. No definite movement towards a modification of the State educational system was taken until 1844, when a Committee of the Legislative Council recommended the adoption of the Irish National System. Four years later an Act was passed under which two Boards were constituted, one of which was to control the denominational system, and the other the secular or national system. This dual control lasted until 1866, when a Public Schools Act was passed, which, though not interfering with the two classes of schools, placed the control of schools receiving a subsidy from the State in the hands of a Board appointed by the Government, and styled the Council of Education, while the denominational schools were governed in conjunction with the various religious bodies by which they had been founded. Although education made fair progress under this dual control, the inherent defects of such a system foredoomed it to failure. Besides, there had been for some time in the minds of a large section of the community a growing repugnance to the principle of granting State aid to religious schools, and the feeling culminated in the passing of the Public Instruction Act of 1880. This measure, introduced under the auspices of Sir Henry Parkes, abolished payment to the denominational schools, and entirely remodelled the State educational system. In the first place, the Education Act of 1866 was repealed, the Council of Education dissolved, and the control of educational matters placed in the hands of a Minister for

Public Instruction. Provision was made for the establishment and maintenance of public schools to afford primary instruction to all children without sectarian or class distinction; of superior public schools, in which additional lessons in the higher branches might be given; of evening public schools, with the object of instructing persons who had not received the advantages of primary education while of school age; and of high schools for boys and girls, in which the course of instruction should be of such a character as to complete the public school curriculum, or to prepare students for the University. It was provided that in all schools administered under the Act the teaching should be strictly non-sectarian; but the words "secular instruction" were held to include general religious teaching, as distinguished from dogmatical or polemical theology. The history of England and of Australia, it was decided, should form part of the course of secular instruction. Four hours during each school day were to be devoted to secular instruction exclusively; but it was provided that another hour each day might be set apart for religious instruction, to be given in a separate class-room by a clergyman or religious teacher of any persuasion to children of the same persuasion whose parents had no objection to their receiving such religious instruction.

With the exception of the Church of England, this provision permitting religious instruction to be given to scholars in State schools has not been taken advantage of to any great extent by the various denominations. Nine salaried teachers are employed by the Church of England in the Diocese of Sydney to give special religious instruction in public schools. One of the Bishop's chaplains holds the appointment of Diocesan Inspector of Schools; but he has no authority outside the classes for special religious instruction. During the year ended 30th June, 1905, there were over 26,000 children regularly instructed by paid teachers, voluntary teachers, catechists, and clergy, in the Diocese of Sydney. Exclusive of infants, it is estimated that about 80 per cent. of the Church of England children attending public schools in the Diocese were receiving special religious instruction.

The total number of visits paid by clergymen and religious teachers, and the number of children enrolled in classes for religious instruction, for the year 1905, were as shown below:—

Denomination.	Number of visits during the year.	Number of Children enrolled.
Church of England	23,769	107,165
Roman Catholic	797	29,662
Presbyterian	7,150	23,811
Methodist	7,378	28,295
Other denominations	3,387	14,857

It is compulsory for parents to send their children between the ages of 6 and 14 years to school for at least seventy days in each half-year, unless just cause for exemption can be shown. Penalties are provided by the Act for breaches of this provision. But although education was thus compulsory, it was not until the latter half of 1906 that the payment of school fees was abolished. Prior to that date a weekly fee of 3d. per child had to be paid, with a maximum of 1s. for all the children of one family; but exceptions were made in the cases of parents who were unable to pay.

The fees thus received were not the property of the teacher, but were paid into the Consolidated Revenue Fund, and the amount collected annually exceeded £80,000.

Special arrangements are made for the conveyance of children to school. They are allowed to travel free by rail to the nearest public or private primary school, to the nearest superior public school, provided they are sufficiently advanced to be enrolled in the fifth class, and to the High Schools. In districts remote from the railway, coaches are subsidised by the Government to convey children to and from the nearest school.

Other sections of the Act permit of the establishment of provisional schools, and the appointment of itinerant teachers in remote and thinly-populated districts. The multiplication of small schools in the various districts has, however, recently fallen into disfavour, as it is recognised that one central school would offer the dual advantage of greater economy and increased efficiency. Where possible, it is intended to abolish clusters of small schools, and replace them by well-equipped central institutions, to which the children would be conveyed free of charge. During 1905 this system of conveyance was in operation in connection with thirteen schools. In thinly-populated districts so far removed from any State-aided school that attendance at such is out of the question, the State grants subsidies to small private schools. There were 192 of these subsidised institutions in operation during 1905. Provision is also made for the establishment of training schools for teachers. It is enacted that Local Boards shall be appointed, whose duty it is to visit and inspect the public schools placed under their supervision, to suspend teachers in cases of misconduct not admitting of delay, to endeavour to induce parents to send their children regularly to school, and to report the names of parents or guardians who refuse or fail to educate their children. Comparatively few of the Local Boards, however, take any great interest in the welfare of the schools in their district. It should be observed that parents are not compelled to send their children to the public schools; they have full choice in the matter, the State only insisting that a certain standard of education shall be attained, no matter whether the instruction be imparted in public or private schools. The weak point in this proviso, however, lies in the fact that the State has no means of ascertaining the character of the instruction given in private schools, many of which, it is to be feared, are conducted by ill-educated and unskilled persons. Furthermore, nothing can be said regarding the regularity of attendance at these institutions, as the entry-books are not open for inspection by State officers.

EDUCATIONAL PROGRESS.

Great as has been the material progress of the State, its intellectual advancement has been much more rapid. At the Census of 1881, out of the 751,468 persons enumerated, there were 195,029, or very nearly 26 per cent., unable to read; while of the 977,176 natives of the State at the Census of 1901, only 226,780, or 23·2 per cent., were returned as unable to read. Included in this number were 154,659 children of 4 years of age and under, so that there were only 72,121 persons, or 8 per cent. of the population 5 years of age and over, who were unable to read.

Another gauge of educational progress will be found in the entries of the marriage registers signed by marks. The earliest official record of marriages is that for 1857. Of 5,804 persons married during that year, 1,646, or 28·4 per cent., were unable to sign the marriage register; while in 1905 the number of such persons was only 246, or a little over 1 per cent. of the total number married. A generation has passed away during the period embraced by the following table, and the improvement shown thereby cannot fail to be interesting:—

Year.	Persons married.	Percentage signing with marks.	Number signing with marks.	Year.	Persons married.	Percentage signing with marks.	Number signing with marks.
1857	5,804	28·4	1,646	1902	20,972	1·2	255
1880	11,144	6·7	743	1903	19,518	1·1	214
1890	15,752	2·7	426	1904	20,844	0·9	188
1900	19,992	1·5	290	1905	21,940	1·1	246
1901	21,076	1·3	283				

The progress which this table shows is marvellous; and, moreover, in considering the proportion of persons signing with marks in 1905, the fact must not be lost sight of that, of the 246 persons who so affixed their signatures to the marriage registers in that year, some were not born in New South Wales, and arrived too late in life to avail themselves of its educational system.

Only an imperfect comparison of the number of children receiving instruction during past years can be made, as the number in actual attendance cannot be distinguished from the number enrolled. The following table gives the number of schools, both public and private, including the University, and the number of enrolled scholars for a period of sixty-nine years; and though it cannot be taken as absolutely correct, it may be relied on as being fairly indicative of the educational progress of the State. Victoria, it should be remembered, was separated in 1851, while in 1861 Queensland had also been formed into a separate colony.

Year.	Population of the State.	Schools.	Children enrolled.	Percentage of population enrolled.
1836	77,096	85	3,391	4·4
1841	149,669	209	9,632	6·4
1851	197,168	423	21,120	10·7
1861	357,978	849	37,874	10·6
1871	517,758	1,450	77,889	15·0
1881	765,015	2,066	197,412	25·4
1900	1,354,340	3,666	300,837	22·2
1901	1,372,060	3,723	304,653	22·2
1902	1,393,600	3,731	305,380	21·9
1903	1,422,800	3,722	304,722	21·4
1904	1,446,440	3,741	301,412	20·8
1905	1,478,600	3,774	299,518	20·3

The number of children given above as enrolled in the various schools is, of course, far in excess of the actual school attendance, as the gross enrolment for the year is given, and not the mean for each quarter. The latter information cannot be obtained except for recent years; but the figures as they stand give a basis of comparison which is not without value.

The following table shows the total enrolment of distinct children during the ten years which closed with 1905, as well as the quarterly enrolment, in the public and private schools of the State, omitting the Sydney Grammar School and the University. The mean quarterly enrolment may be taken as giving the nearest approximation to the number of children actually under tuition in State and private schools.

Year.	Schools.	Teachers.	Scholars.		
			Total enrolment.	Mean quarterly enrolment.	Percentage of children of school age in mean quarterly enrolment.
1896	3,467	7,529	275,570	250,992	82·3
1897	3,525	7,788	282,300	258,090	81·4
1898	3,558	8,028	285,740	262,089	81·1
1899	3,746	8,291	293,392	268,791	82·0
1900	3,657	8,415	298,709	273,040	80·2
1901	3,707	8,565	302,072	273,007	83·7
1902	3,714	8,740	302,607	271,787	83·8
1903	3,703	8,908	301,774	271,576	83·5
1904	3,722	8,977	298,442	269,300	83·4
1905	3,754	9,041	296,483	269,250	84·9

In the total enrolment for 1905, the 1,613 children in reformatories, industrial schools, and charitable institutions were not included. Taking these into account, 85 per cent. of all the children of school age were receiving instruction in schools. The ages of children enrolled at State and private schools during 1905 were as follows:—

Age Period.	State Schools.	Private Schools.	Total.
Under 6 years ……	7,507	4,848	12,355
6 and under 14 years	184,352	44,269	228,621
14 years and over …	19,537	8,737	28,274
Total ………	211,396	57,854	269,250

In the next table will be found a classified statement of the total public and private schools in operation during the last quarter of 1905, exclusive of the University:—

Class.	No. of Schools.	Teachers.			Scholars—December Quarter.		
		Males.	Females.	Total.	Males.	Females.	Total.
State Schools ……………………	2,901	3,135	2,424	5,559	108,729	97,281	206,010
Sydney Grammar School………	1	26	…	26	560	…..	560
Private Colleges and Schools …	853	599	2,883	3,482	25,194	32,660	57,854
Institute for the Deaf and Dumb and the Blind…….. ………	1	7	5	12	54	36	90
Ragged Schools …………………	5	3	10	13	217	185	402
Free Kindergarten Schools ……	8	…	34	34	158	211	369
Reformatory ……………………	1	1	…	1	124	……	124
Industrial Schools………………	2	3	2	5	360	102	462
School for Destitute Children…	1	2	2	4	112	56	168
	3,773	3,776	5,360	9,136	135,508	130,531	266,039

Under the Public Instruction Act it is only compulsory to send children between the ages of 6 and 14 years to school; but children of 5 years of age are received at the public schools, and, as will be seen from the figures given, many scholars of that age are in attendance at State and private schools, as well as a very considerable number who have passed the school age.

According to the Census of 1901, the number of children of school age in New South Wales—that is to say, those who were not less than 6 years of age, and had not passed the age of 14—was 263,802, of whom 233,590 were receiving instruction in public and private schools and public institutions, namely, 172,352 at State schools, and the remainder at the various private and denominational schools, reformatories, and charitable institutions in the State; 12,755 were receiving instruction at home; and 17,457 were under no tuition, but this number must have included a number of boys who had left school. The number of children of school age receiving instruction formed 93·37 per cent. of the total; and in addition there were 30,300 children outside the limits of school age who were in attendance at State schools, 13,400 at private and denominational schools, as well as 583 students at the University of Sydney.

The weakness of the compulsory clauses of the Education Act is in great measure responsible for the fact that attendance at the State schools is not so high as it should be. The burden of proof of school attendance rests with the Crown, and a common device resorted to in order to evade action by the Department, is for the parents to state that a child attends some private institution, the principal of which cannot be compelled to produce records. Again, the fines imposed for breaches of the Act are so inadequate that parents gladly pay them, finding themselves amply reimbursed by the value of their children's labour, who in busy times are frequently kept away from school for lengthened periods. More stringent measures are also needed to cope with the evil of truancy, which experience has shown to be one of the most fruitful causes of juvenile crime. It is a regrettable circumstance that at present the Act in many cases cannot reach children whose names are not on the roll of any school, while the parents of others whose attendance falls short of the prescribed 70 days in each half-year are liable to prosecution. It is hoped that these anomalies will shortly be remedied by legislation.

At the Census periods of 1861, 1871, 1881, 1891, and 1901, the degree of education of every 10,000 children over 5 and under 10 years of age was as follows:—

	1861.	1871.	1881.	1891.	1901.
Read and write......	2,355	3,470	4,413	5,377	5,575
Read only	3,289	2,752	1,962	1,368	896
Unable to read	4,356	3,778	3,605	3,255	3,529

Taking the children from 10 and under 15 years, the comparison is still more satisfactory:—

	1861.	1871.	1881.	1891.	1901.
Read and write......	6,769	7,666	8,804	9,705	9,805
Read only	1,854	1,292	614	143	65
Unable to read	1,377	1,042	582	152	130

The steady decrease in the proportion of illiterate children from 1861 to 1871, and from 1871 to 1881, is plainly visible from the above tables, and the returns for 1891 and 1901 showed that this satisfactory decrease continued.

STATE SCHOOLS.

When the present Public Instruction Act came into operation on the 30th April, 1880, the Council of Education ceased to exist, and handed over to the new administration the schools which at that time were under its control. At the date mentioned there were maintained or subsidised by the Government, 1,220 schools, attended by 101,534 scholars, thus distributed:—

	No. of Schools.	No. of Pupils.
Public	705	68,823
Provisional	313	8,312
Half-time	97	1,683
Denominational	105	22,716
Total	1,220	101,534

At the close of 1882 the connection of the denominational schools with the State ceased, and the subsequent year is marked, as was to have been expected, by a considerable falling-off in the number of children who were receiving their education at the expense of the State. The check only operated for a short period, as the year 1884 showed a recovery of more than the ground lost. This will be seen by the following table, which shows the enrolment and attendance of children at State-supported schools under the Public Instruction Act only:—

Year.	Gross enrolment of distinct children.	Quarterly enrolment.	Average attendance.
1882	159,490	134,872	90,944
1883	155,824	130,205	88,546
1884	167,134	139,159	95,215
1891	205,673	178,278	122,528
1900	238,382	212,713	153,845
1901	241,790	212,725	154,404
1902	243,668	212,848	155,916
1903	243,516	213,318	154,382
1904	240,631	211,489	153,260
1905	238,629	211,396	153,963

From the time of the withdrawal of aid from denominational schools up to the end of 1905 the increase in the average quarterly enrolment at State schools was 56·7 per cent. In 1905 the proportion of the population enrolled at State schools, on the basis of the quarterly returns, was 14·3 per cent., as compared with 14·6 per cent. in 1904; and the proportion in average attendance, 10·4 per cent. as compared with 10·6 per cent. in 1904. The increase or decrease in the average quarterly enrolment to the end of 1905 was as follows:—

Year.	Per cent.	Year.	Per cent.	Year.	Per cent.
1885	5·3	1892	4·4	1899	2·3
1886	4·6	1893	0·1	1900	2·0
1887	2·6	1894	*2·5	1901	nil
1888	2·3	1895	5·7	1902	„
1889	2·4	1896	2·6	1903	„
1890	3·4	1897	2·5	1904	*0·9
1891	4·6	1898	1·0	1905	nil

* Decrease.

It will be seen that the figures show no improvement during the last five years, the falling-off being due principally to the decline in the birth-rate over the period in question.

The table below affords a comparison between the number of schools in operation in 1881, the first full year in which the Department was under Ministerial control, and the number open in 1905:—

Classification.	No. of Schools or Departments in operation.	
	1881.	1905.
High Schools	......	4
Superior Public Schools	58	323
Primary Public Schools	1,042	1,841
Provisional Schools	246	456
Half-time Schools	93	392
House-to-house Schools	......	17
Evening Schools	57	42
Subsidised Schools	......	192
Total	1,496	3,267

The 3,267 schools or departments shown above provided accommodation for 290,000 pupils, and as the total enrolment in 1905 was 238,629, it will be seen that the Department has amply supplied requirements for space in the way of school buildings. Great improvements have been effected in school architecture during recent years, and some of the New South Wales institutions will compare favourably with the best of those in other lands. While the lighting and ventilation in many of the earlier buildings is still rather defective, vigorous efforts are being put forward to remodel them in accordance with scientific principles.

According to an investigation made a few years ago, all children attending the public schools of the State are taught to read; 90 per cent. are instructed in writing, arithmetic, music, and drill, and receive scriptural and moral as well as object lessons; 88 per cent. in drawing; 80 per cent. write to dictation; 40 per cent. are instructed in the rules of English grammar; and 39 per cent. are taught geography and history; while over 80 per cent. of the girls receive instruction in needlework. Under the new system of examination, figures for all the schools are no longer available. The inspectors are not now obliged to examine into every detail of school work, with a view to awarding "marks," their duties being rather in the direction of acting as apostles of the revised system of education.

The State provides separately the necessary facilities for acquiring technical knowledge under a system of training about which more will be said further on.

The teachers in the public schools of the State at the end of 1905 numbered 5,559, of whom 3,135 were males and 2,424 females. This was a decrease of 22 on the number of the previous year. The average number of pupils per teacher, on the basis of the mean quarterly enrolment, was 38, and the average attendance per teacher, 27, while the average quarterly enrolment of children per school department was 68. The following table shows the classification of the teaching staff at the end of 1905:—

Grade.	Males.	Females.	Total.
Principal Teachers	2,196	339	2,535
Mistresses of Departments	....	225	225
Assistants	504	1,154	1,658
Students in Training Schools	50	45	95
Pupil-teachers	371	551	922
Work-mistresses	....	98	98
High School Teachers	14	12	26
Total	3,135	2,424	5,559

The teachers obtain promotion from one class to another only after passing a series of examinations, which are so framed as to efficiently test their progress in literary attainments, and their skill in imparting knowledge. For long and meritorious service, however, a teacher may receive promotion from one section to another in the same grade. There are ten classes of public schools. In these, the salaries paid to male married teachers range from £108 to £400; quarters valued at £20 to £72 are provided in addition. Unmarried male teachers in charge of schools receive from £72 to £400, and female teachers from £72 to £168. Teachers in half-time schools are paid at the same rates as teachers in public schools of corresponding classification. The salaries of mistresses in charge of girls' departments range from £170 to £280; and of those in charge of infants' departments, from £160 to £194. Assistant male teachers receive from £96 to £260, and assistant female teachers from £96 to £180. Ex-students of training schools acting as assistants receive £96 to £144 in the case of males, and £84 to £120 in the case of females. Ex-pupil-teachers, male or female, acting as assistants, receive £90 if they have passed their final examination, and if not, from £72 to £88. The salaries of work-mistresses range from £86 to £120; of provisional teachers, from £72 to £100; of male pupil-teachers, from £40 to £65; and of female pupil-teachers, from £35 to £45. Teachers in house-to-house schools receive £5 per head of average attendance, with a maximum of £90. Teachers are granted, where necessary, a sum of £10 per annum as forage allowance, in addition to their ordinary remuneration. Special allowances may be granted to teachers stationed in remote localities, where the cost of living is high.

TEACHERS' TRAINING SCHOOLS.

Up to the year 1905 the teachers in New South Wales State schools, generally speaking, commenced their career between the ages of 14 and 16 years, when they were known as pupil-teachers. As such they were held responsible for the instruction of a certain number of children, and in return for their services received payment, partly in the form of a small salary and partly in teaching and advice from the principals of the schools wherein they were employed. After serving four years, the pupil-teachers then underwent a course of training in the training college, if successful in passing a qualifying examination, and on emerging from this institution were called assistant teachers, and later on became masters or mistresses of schools. Pupil-teachers who did not enter the training colleges were either placed in charge of small schools or appointed as assistant teachers, and, after some lapse of time, were allowed to compete in the ordinary examinations just the same as the trained teachers, and, in fact, many of them found it temporarily to their advantage, from a pecuniary point of view, not to enter the training colleges. In addition to those who had gone through the course outlined above, there was the considerable body of practically untrained teachers who had commenced their career in the small schools in outlying districts of the State, many of whom by perseverance and natural aptitude for teaching had attained positions of considerable importance under the Department.

Within the last few years, however, it has come to be recognised that a system wherein persons were appointed as teachers without previous training, or else allowed to teach for a period of four years prior to undergoing a course of training, was illogical, and the Department has now determined to place the course of training in its right position, *i.e.*, antecedent to employment on the regular teaching staff. Under the revised scheme, therefore, the pupil-teacher system will be abandoned; but the process, of course, will have to be a gradual one, for at the end of 1905 there were still 922 pupil-teachers employed in the State schools.

It is intended that these, in addition to all future accessions to the ranks of the teaching service, shall as far as possible go through a course of training in a properly-appointed college, and provision has been made for a liberal scheme of scholarships in connection therewith.

Up to 1905 the Training College for males was a non-residential institution worked in connection with the Fort-street Model School, while accommodation and training was afforded to female teachers by the Hurlstone College. Both of these institutions have now been closed, and it is proposed to replace them by a well-equipped institution in connection with the University, where students of each sex can be received into residence. Pending the erection of this building, the work of training both male and female teachers is being carried on at the Blackfriars Public School, that being the only suitable institution within easy reach of the University and the Technical College.

Fifty male and forty-five female teachers were undergoing a course of training in 1905.

As remarked previously, the so-called pupil-teacher will gradually become extinct. In order to provide a supply of teachers to take their places, a scheme has been evolved whereby young people of both sexes who wish to become teachers will be admitted after examination to a two years' course of study at schools classified as District Schools. On completion of this course, pupils will be eligible to sit at the necessary examination for admission to the Training College. The minimum age for admission to probationary student classes in the District Schools is 15 years. Liberal provision has been made by the Department in the way of bursaries and scholarships both in the case of the District Schools and in that of the Training College.

EXPENDITURE ON STATE SCHOOLS.

The average cost per child in average attendance at the public schools has greatly varied, as will be seen by the following table, which gives the amounts for the last ten years:—

Year.	For school premises.	For the maintenance of schools.	For administration, and training schools.	Total.
	s. d.	£ s. d.	s. d.	£ s. d.
1896	8 0	3 17 3	6 4	4 11 7
1897	11 5	3 15 6	6 4	4 13 3
1898	14 10	4 1 8	6 6	5 3 0
1899	12 2	4 0 0	6 5	4 18 7
1900	14 10	3 19 11	6 8	5 1 5
1901	7 6	4 4 6	6 8	4 18 8
1902	9 10	4 7 4	7 4	5 4 6
1903	13 1	4 11 2	7 4	5 11 7
1904	9 5	4 14 2	7 0	5 10 7
1905	7 8	4 14 9	6 9	5 9 2

In considering the question of the expenditure on education in New South Wales during past years, it should be borne in mind that the expenses contingent upon the necessity of obtaining efficient results in a country of such a vast extent and so sparsely populated were unavoidably great. School-houses had to be built, teachers required training, and the whole educational machinery had to be provided in many parts of the country where there was perhaps only a denominational school, or, just as likely, no educational establishment at all. To these initial expenses was due, in a great measure, the relatively high cost of public education in the first few years after the passing of the Act of 1880. In 1883, for instance, the total cost per child in average attendance was not less than £9 5s. 7d. In 1888 this had been reduced to £5 6s. 5d., and in 1900 to £5 1s. 5d. The average for 1905 stood at £5 9s. 2d., but in this connection it must be remembered that owing to the declining birth-rate the attendance has fallen away to some extent during the last five years.

The following table shows the gross expenditure by the State on primary education during the ten years ended 1905, and the annual amount per head of population:—

Year.	Total Amount.	Per head of population.	Year.	Total Amount.	Per head of population.
	£	s. d.		£	s. d.
1896	651,307	10 3	1901	761,637	11 1
1897	692,395	10 9	1902	814,883	11 8
1898	729,922	11 1	1903	861,544	12 1
1899	737,080	11 1	1904	847,830	11 9
1900	780,216	11 6	1905	839,976	11 4

The above figures show that provision for educational needs has more than kept pace with the expansion of population during the period covered by the table.

A division of this expenditure under the two heads of "School Premises" and "Maintenance and Administration" is shown below, and the deduction of the school fees received gives the net cost to the State during each of the ten years in question:—

Year.	Number of Schools.	Gross enrolment of distinct Pupils.	Expenditure on school premises.	Expenditure on maintenance of schools, including administration, &c.	Total Expenditure.	School Fees.	Net State Expenditure.
			£	£	£	£	£
1896	2,574	221,603	56,752	594,555	651,307	74,866	576,441
1897	2,577	226,157	84,909	607,486	692,395	73,684	618,711
1898	2,602	227,561	105,054	624,868	729,922	73,093	656,829
1899	2,693	233,233	90,926	646,154	737,080	78,358	658,722
1900	2,745	238,382	114,279	665,937	780,216	82,494	697,722
1901	2,818	241,790	57,663	703,974	761,637	80,240	681,397
1902	2,846	243,668	76,793	738,090	814,883	85,230	729,653
1903	2,862	243,516	100,955	760,589	861,544	82,906	778,638
1904	2,870	240,631	72,051	775,779	847,830	81,825	766,005
1905	2,901	238,629	58,820	781,156	839,976	81,367	758,609

It will be seen that the amount directly contributed by parents towards their children's education is but a small proportion of the total cost. In 1905 the contributions of the parents came to £81,367, this amount being about equal to that received in the preceding year. The fees received in 1902 totalled £85,230, and represented the largest amount ever obtained from this source.

Of the 2,901 schools shown above, nearly 60 per cent. were small schools averaging less than 30 in daily attendance. Owing to the migration of families for various reasons, it is occasionally found necessary to close some of these institutions, and in such cases the regulation permitting the granting of subsidies in isolated districts has been availed of. At the close of 1905 there were 160 subsidised schools in operation, with an enrolment of 1,619 children.

The following statement shows the gross and net cost to the State of each child in average attendance at the public schools during the period 1896-1905:—

Year.	Gross Expenditure.	Amount of Fees received.	Net Cost to State.
	£ s. d.	£ s. d.	£ s. d.
1896	4 11 7	0 10 6	4 1 1
1897	4 13 3	0 9 11	4 3 4
1898	5 3 0	0 10 3	4 12 9
1899	4 18 8	0 10 6	4 8 2
1900	5 1 5	0 10 9	4 10 8
1901	4 18 8	0 10 5	4 8 3
1902	5 4 6	0 10 11	4 13 7
1903	5 11 7	0 10 9	5 0 10
1904	5 10 8	0 10 8	5 0 0
1905	5 9 1	0 10 6	4 18 7

During the year 1905 the average attendance of scholars to whom free education was granted was 30,661, equal to a percentage of 20·3 of the total daily attendance. It was explained by the Minister in his Annual Report that debts to the amount of £1,712 were cancelled during the year.

SCHOOL SAVINGS BANKS.

In accordance with a design long contemplated, savings banks were opened during 1887 in connection with the public schools of the State. At the close of 1905 there were 678 banks in operation, as compared with 669 at the close of 1904. The deposits for the year amounted to £20,495, and the sum withdrawn was £18,994. The total amount to the credit of the school banks on the 31st December, 1905, was £10,778, as compared with £9,524 at the end of 1900. Since 1887 the total sum deposited amounted to £259,849, while the withdrawals were £249,071. Of the latter sum an amount of £62,847 was withdrawn for the purpose of being placed to the credit of children's accounts in the Government Savings Bank. The object aimed at in establishing these banks is to inculcate practically the principles of economy while yet the minds of the children are susceptible of deep impressions.

SCHOOL BOARDS.

The local supervision of the public schools is placed in the hands of School Boards appointed in the various districts of the State, under the provisions of the Public Instruction Act. These Boards are supposed to exercise a general oversight in regard to the public schools in their districts, but cannot interfere with the internal discipline or management of the schools, which remain under the direct control of the Minister of Public Instruction, through the inspectors and other officers of his Department. The total number of Boards in operation at the close of 1905 was 319. It appears that in some instances these Boards take but a perfunctory interest in the welfare of the schools in their districts.

PRIVATE SCHOOLS.

The attendance at private schools greatly increased after the withdrawal of aid from the denominational schools which had been under the control of the Education Department. Many of these establishments ceased to exist immediately on the withdrawal of State aid, and the children by whom they had been attended were transferred for the most part to the ordinary public schools of the State. Some of the schools, however, were still maintained, chiefly those connected with the Roman Catholic Church, and thenceforth appear in the returns as private schools.

Below will be found a statement showing the number of private schools in the State during each of the ten years 1896 to 1905, with the teaching staff and number of scholars enrolled:—

Year.	Schools.	Teachers.	Scholars.	Year.	Schools.	Teachers.	Scholars.
1896	893	3,087	53,967	1901	889	3,353	60,282
1897	948	3,162	56,143	1902	868	3,339	58,939
1898	956	3,269	58,179	1903	841	3,368	58,258
1899	1,053	3,407	60,159	1904	852	3,396	57,811
1900	912	3,352	60,327	1905	853	3,482	57,854

There is no doubt that many of these private institutions are capably managed and the instruction given is of a high order, but on the other hand there are numerous schools in charge of persons whose knowledge and ability to teach are equally meagre. The remedy for this would be for the State to insist on a certain standard of education being observed, such as prevails in the public schools, while making it obligatory on teachers to furnish proof of possessing the requisite knowledge and ability to impart instruction. The private school system also affords an opportunity for unscrupulous parents to evade the compulsory clause of the Public Instruction Act, as the State has no means of knowing whether children enrolled in these schools attend them with any degree of regularity.

The 853 schools opened during 1905 may be divided into the following classes:—

Classification.	Schools.	Teachers.	Scholars.
Undenominational	421	1,252	11,131
Roman Catholic	361	1,835	41,268
Church of England	60	295	3,954
Presbyterian	4	44	318
Methodist	2	34	287
Lutheran	1	2	44
Hebrew	1	6	613
Seventh Day Adventist	3	14	239
Total	853	3,482	57,854

Not a few of the schools returned as undenominational are conducted under the auspices of local churches, though no particular form of religious opinion is inculcated therein. Of distinctly religious schools, those of the Roman Catholic Church comprise the great majority, numbering 83·6 per cent. of professedly denominational schools, and including 88·3 per cent. of the scholars educated therein. On the withdrawal of State assistance from denominational schools in 1882, there were in operation under the Department of Education, 75 Roman Catholic schools, attended by 16,595 pupils; while there were also some unassisted schools connected with this Church, of which statistics were not available. In 1891 the number of schools had increased to 250, with an enrolment of 30,691 pupils; while in 1905 the number had grown to 361, with an enrolment of 41,268. The table given below shows that during the last ten years the record is one of continuous progress:—

Year.	Schools.	Teachers.	Scholars on Roll.			Average Attendance.		
			Males.	Females.	Total.	Males.	Females.	Total.
1896	293	1,527	16,603	19,949	36,552	12,967	16,004	28,971
1897	296	1,481	16,494	20,181	36,675	12,954	16,208	29,162
1898	312	1,573	17,236	21,227	38,463	13,214	16,550	29,764
1899	318	1,613	17,785	21,864	39,649	13,758	17,265	31,023
1900	325	1,617	17,887	22,249	40,136	13,988	17,571	31,559
1901	341	1,721	18,731	22,755	41,486	14,817	18,160	32,977
1902	342	1,694	18,488	22,380	40,868	14,584	17,761	32,345
1903	350	1,778	18,469	22,520	40,989	14,779	17,906	32,685
1904	355	1,787	18,462	22,650	41,112	14,780	17,943	32,723
1905	361	1,835	18,477	22,791	41,268	14,703	18,205	32,908

The Church of England is the only other religious body maintaining a considerable number of schools. During 1905 the schools connected with this church numbered 60, and were attended by 3,954 pupils. At the end of 1882 there were in existence 42 Church of England schools, with an enrolment of 11,927 children. The following table gives particulars of these schools during the past ten years:—

Year.	Schools.	Teachers.	Scholars on Roll.			Average Attendance.		
			Males.	Females.	Total.	Males.	Females.	Total.
1896	44	185	1,581	1,518	3,099	1,025	1,151	2,176
1897	50	228	1,910	1,975	3,885	1,459	1,500	2,959
1898	57	280	2,082	2,248	4,330	1,611	1,630	3,241
1899	59	299	2,072	2,173	4,245	1,583	1,671	3,254
1900	55	295	1,967	2,191	4,158	1,496	1,706	3,202
1901	52	240	1,868	2,098	3,966	1,434	1,585	3,019
1902	57	293	2,007	2,256	4,263	1,617	1,781	3,398
1903	59	322	2,110	2,356	4,466	1,740	1,837	3,577
1904	56	285	1,988	2,128	4,116	1,654	1,714	3,368
1905	60	295	1,930	2,024	3,954	1,554	1,567	3,121

As the table shows, there has been a decrease in enrolment and average attendance at these schools during the last three years.

HIGHER EDUCATION.

It has already been mentioned that the State has made provision for higher education by the establishment of High Schools in the metropolis, and the principal centres of population. The curriculum of these schools is of such a character as to enable students to complete the course of instruction the basis of which they acquired in the Public Schools, and if they so wish, to prepare themselves for the University examinations. Admission to these schools is by examination only. There were at the close of the year 1905 two High Schools for boys and two for girls. The gross enrolment for that year was 398 boys and 295 girls, making a total of 693 pupils, as against 662 for 1900. The average daily attendance in 1905 was 524, as against 476 for the year 1900. The expenditure on these schools amounted in 1905 to £6,658, while the fees received came to £3,481, so that the net cost to the State was £2,957, or £4 11s. 8d. per head of the total enrolment. During 1905 99 pupils from the High Schools passed the junior, 29 the senior, and 45 the matriculation examinations at the University, 28 of the matriculants qualifying at the junior, and 14 at the senior examinations.

Superior Public Schools, in which the subjects taught embrace, in addition to the ordinary course prescribed for Public Schools, such other subjects as will enable the student to compete at the senior and junior public examinations are also established. There were 141 of these schools in existence at the end of 1905, with an enrolment of 88,234 pupils. It is important to recollect that these figures do not show the number of children receiving higher education. The results of the University public examinations for 1905 show that 11 senior and 253 junior passes were obtained by Public School pupils. Of these the whole of the senior passes and 102 junior certificates were gained by the Fort-street Model School. It is interesting to note that, out of the total passes of all candidates from New South Wales at the junior examination in 1905, nearly 53 per cent. were obtained by scholars attending the Public Schools.

In addition to the High Schools, what are known as District Schools have been established at twenty-one centres. These schools, while giving a sound secondary education to the pupils who attend them, will also serve as preparatory training-schools for young people who desire to enter the teaching profession.

A system of scholarships and bursaries for boys and girls at State schools has been brought into operation. For the High Schools there are 50 scholarships open for competition annually, viz., 30 in the Sydney schools and 20 in the Maitland schools. These scholarships are tenable for three years, and entitle the holders to free tuition and text-books. Scholarships have also in a few instances been made available at Superior Public Schools. Bursaries are available for admission to the Superior Schools, High School, or Sydney Grammar School. There are 24 bursaries open for competition in the metropolitan and sub-metropolitan districts, and twelve in the country districts. Six bursaries are available at each of the High Schools in the Maitland district. A bursary is tenable for three years and carries the right to free education and free text-books. When a bursar is compelled to live away from home, an allowance not exceeding £30 per annum is made. Bursars who live at home receive an allowance not exceeding £10 per annum. Examinations for scholarships and bursaries are held in June and December. In addition to the foregoing, 12 University bursaries, 6 for boys and 6 for girls, are granted to successful competitors in order of merit at the matriculation examination. Candidates must be under 18 years of age and have attended a State High School, Public School, or as State bursars at the Sydney Grammar School. Bursars receive free books and education with allowance not exceeding £20 to those living at home and not exceeding £50 per annum to those who cannot do so.

In addition to the various classes of Public Schools already mentioned, there exist several institutions of an educational character which receive an annual subsidy from the Government. The most important of these is the Sydney Grammar School, which is one of the principal schools of the State. In 1905 the mean quarterly enrolment was 559, and the average attendance 529. This school receives an annual endowment from the State of £1,500. In 1905 the other revenue, derived from school fees and other sources, amounted to £9,639. The total expenditure for the year was £11,368, of which salaries and allowances absorbed £9,884.

THE UNIVERSITY.

In the year 1849 Mr. Wentworth presented a petition to the mixed Legislative Council from certain shareholders of a proprietary school, known as Sydney College, praying for the appointment of a select committee of the House "to consider the best means of carrying on the institution so as to afford the youth of the Colony the means of obtaining instruction in the higher branches of literature and science." The committee was appointed, but it received somewhat different instructions, being directed to "consider and report how best to institute a university for the promotion of literature and science, to be endowed at the public expense." The committee, after a few weeks' deliberation, brought up its report, recommending the establishment of a university with a permanent endowment of £5,000 per annum out of the general revenue, and a bill was brought in by Mr. Wentworth in accordance with the report. The Council was shortly afterwards prorogued, and the measure consequently lapsed for that session. In 1850 the bill, which was based mainly on the charter of University College, London, was reintroduced by Mr. Wentworth, and, after some discussion and a few amendments, was passed, receiving the Royal assent on the 1st October of that year.

The endowment was given for "defraying the stipends of teachers in literature, science, and art," and for administration purposes, there being no provision made for teaching any other branch. Power was, however, given to examine and grant degrees after examination in law and medicine as well as in arts. The University was to be strictly undenominational, and the Act expressly prohibited any religious test for admission to studentship or to any office or for participation in any of its advantages or privileges. Residence was not contemplated otherwise than in affiliated colleges, but authority was given to license tutors and masters of boarding-houses with whom students of the University might live.

A Senate of sixteen Fellows was constituted by the original Act to govern the University, and it was empowered to elect from among its members its own Provost and Vice-Provost, which titles were later on changed to those of Chancellor and Vice-Chancellor. The Fellows were, in the first instance, nominated by the Crown, but were to be replaced, as vacancies arose, by the Fellows themselves until there should be 100 graduates holding the degree of Master in Arts or of Doctor in Law or Medicine. The first Senate commenced its labours at the close of the year 1850, with Mr. Edward Hamilton, M.A., as Provost, and Sir Charles Nicholson, M.D., as Vice-Provost. It shortly established three chairs in Classics, Mathematics, Chemistry, and Experimental Physics, and sent to England for competent professors to fill them; and on the 11th October, 1852, the University was opened with an imposing ceremony, in presence of the Governor and principal officers, and under the presidency of Sir Charles Nicholson, and twenty-four matriculated students were admitted to membership.

In 1858 a Royal charter was granted, which declares that "the degrees of this University in arts, law, and medicine shall be recognised as academical distinctions of merit, and be entitled to rank, precedence, and consideration in the United Kingdom as fully as if the said degrees had been granted in any university of the United Kingdom."

Since the passing of the original Act various amendments have been made, of which the principal are as follow:—By an Act passed in 1857, those who had taken the degree of B.A. or M.A. received certain privileges in respect of admission to the Bar or to the Roll of Solicitors. In 1861 it was directed that, in addition to the ordinary sixteen Fellows, there should be not fewer than three nor more than six *ex-officio* members of the Senate who should be Professors in such branches of learning as the Senate should by any by-law select; and such Professors and other public teachers and examiners and every superior officer declared to be such by the by-laws should be a member of the University, with the same rights and privileges in respect to the election of new Fellows as were enjoyed by persons holding the degrees of M.A., LL.D., and M.D. In 1881, *ad eundem* degrees, with equal privileges, were authorised to be conferred; and Bachelors of Arts of three years standing were empowered to vote at new elections of Fellows. In 1884 the Senate's powers as regards teaching and degrees were extended by enabling it to give instruction and grant degrees or certificates in all branches of knowledge with the exception of Theology or Divinity, subject to a proviso that no student should be compelled to attend lectures or to pass examinations in Ethics, Metaphysics, or Modern History; and by the same Act it was directed, in accordance with a previous by-law of the Senate, that the benefits and advantages of the University should extend in all respects to women equally with men.

The number of persons entitled to vote at the elections of new Fellows reached 100 in 1872, whereupon the Senate passed by-laws in respect of such elections, and styled the electoral body "Convocation." This body, including the additions made by the several amending Acts, and the heads of affiliated colleges, who had been declared to be superior officers of the University under the Act of 1861, now numbers upwards of 1,000.

The public endowment of the University stood at £5,000 per annum until 1880, when £1,000 was added for assistant lectureships; but in 1877 a bequest of the value of £6,000, producing about £300 a year, was made by Mrs. Hovell, widow of the explorer of that name, for instruction in Geology and Physical Geography; and this sum, together with fees, enabled the Senate to divide the Chair of Chemistry and Experimental Physics into two, to the first of which Geology and Physical Geography were attached. In 1882 a further sum of £5,000 was voted to enable the Senate to establish Schools of Medicine and Engineering, and to give some further help to the original Department of Arts. Medical and Engineering Professors and Lecturers, a Professor of Natural History, and some small lectureships in Arts were created; but this sum was soon found inadequate for the intended purposes, and was increased to £7,900, inclusive of the £1,000 granted in 1880. Allowances were also made for apparatus, and a sum of £2,000 per annum granted for evening classes in Arts. In 1893 the Government endowment amounted to £13,000, and the special grants to £5,695. Since that year the State aid has been largely reduced, and in 1905 the endowment was £10,000, while the special grants totalled £3,250.

Principally out of the endowment for Evening Classes, a system of Extension Lectures to non-matriculants was commenced in 1886, first in the metropolis, and afterwards in the country districts; later on it was extended to the neighbouring colony of Queensland.

In 1855 the present site was granted by Governor Sir Charles Fitzroy, by Royal authority, for the erection of suitable buildings, and also to provide land for the prospective erection of four denominational Colleges. It comprised about 126 acres, formerly known as Grose Farm, to which a further grant of 9 acres was afterwards added for the enlargement of the domain or park. Before this grant was made the work of the University had been carried on in the old Sydney College, which, together with its library and even an endowment for a Scholarship bequeathed by Mr. Solomon Levy, was purchased by the Government for the University, and a grant of £50,000 was made by Parliament in 1853 as a building fund. As early as 1854 an Act was passed to aid and partly endow four colleges within the University. A contribution of not less than £10,000, and not more than £20,000, was to be made from the general revenue for building funds, provided that an equal sum was subscribed by private individuals, and £500 a year was to be paid annually by the Government towards the stipend of the Principal of each College. Just before this, steps had been taken to establish the St. Paul's Church of England College; the St. John's Roman Catholic College followed in 1857, and the Presbyterian College of St. Andrew in 1867. In 1905 the number of students in St. Paul's College was 30; in St. John's, 14; and in St. Andrew's, 45. The Wesleyan body, for whom an equal area had been set apart, declined to accept it, and in 1873 some 12 acres of the land originally intended for a site for their college were resumed by the Crown and dedicated to the Prince Alfred Hospital; and provision was made for the establishment by the University of a Medical School in connection with the Hospital, and for joint control by the University Senate and the Hospital Board in respect to all appointments to the medical and surgical staff of the Hospital. But while the regulations under which students have access to the Hospital are framed by the Hospital Board, with the Senate alone rests the appointment of Professors and Lecturers in the Medical School.

The Women's College—a college within the University of Sydney—was opened in March, 1892. It was established for the purpose of affording residence and domestic supervision to women students of the University, with efficient tutorial assistance in their preparation for the University lectures and examinations. In order that full effect might be given to a principle affirmed in the "University Extension Act of 1884," it was necessary that a college for women should be brought into existence, it having been enacted in this measure that "the benefits and advantages of the University and the provisions of the Acts relating thereto shall be deemed to extend in all respects to women equally with men." The college is strictly undenominational—the Act of Incorporation providing that no religious catechism or formulary which is distinctive of any particular denomination shall be taught, and that no attempt shall be made to attach students to any particular denomination. When the college was opened in a house at Glebe Point, leased until the permanent buildings were completed, the students numbered 4. The present buildings were opened in the early part of 1894, and at the close of that year there were 8 students, while in 1905 there were 23. There is, however, accommodation for 26 resident students. The Government granted £5,000 towards the erection of buildings, but affords no endowment to the college, though it pays the salary of the Principal.

Many donations have been made to the University for the use and reward of students. Among the first were gifts of £1,000 each from Mr. Thomas Barker, Sir Daniel Cooper, and Sir Edward Deas-Thomson, represented by lands which are now of twice that value. Many others followed, and about £60,000 has been presented up to the present date, exclusive of prizes which have been exhausted by award, and irrespective of increases in value. Besides the above, a sum of £30,000 was left by the late Mr. Thomas Fisher for a library, and £6,000 was given by the late Sir William Macleay for a Curatorship of the Natural History Museum, presented by him to the University, and for which the Government have erected a suitable building. There have also been bequests of property other than money to the estimated value of £51,000 up to the present time.

Above all, the late Mr. John Henry Challis left his residuary estate to the University, subject to certain annuities. In December, 1890, the trustees handed over to the University the major part of the Australian portion of the estate, consisting of £199,362 in investments, together with a cash balance. In addition to the above amount, the trustees of the estate in England still retain a sum of about £30,000, set apart for payment of annuities. This sum will ultimately accrue to the funds of the University. Under this bequest, the Senate have created new Chairs in Law, Modern Literature, History, Logic and Mental Philosophy, Anatomy, Engineering, and Biology, to which they have given the testator's name. The Hovell and Challis bequests constituted, until the end of 1894, the only resources of the University for actual education other than the public endowments. During 1896, Mr. P. N. Russell, of London (formerly of Sydney), devoted £50,000 to the purpose of endowing a School of Engineering, and this gift was supplemented by a further grant of £50,000 in 1904. The teaching staff of the University now consists of 15 professors and 55 lecturers and demonstrators.

In the Faculty of Arts there are professorships in Latin, Greek, Modern Literature, Modern History, Logic and Mental Philosophy, and Mathematics, with assistant lecturers in Latin, Mathematics, English, French, and German.

In the Faculty of Law there are a professor of Law and four lectureships in the following subjects, viz.:—Law of Status, Civil Obligations and Crimes, Law of Procedure, Pleading and Evidence, Law of Property, and Equity, Probate, and Bankruptcy and Company Law.

The Faculty of Medicine has three professors in Physiology, Anatomy, and Pathology respectively, with demonstrators in each of these subjects. There are also lectureships in Medicine, Surgery, Clinical Medicine, Clinical Surgery, Midwifery, Diseases of Women, Materia Medica, and Therapeutics, Medical Jurisprudence and Public Health, Ophthalmic Medicine and Surgery, and Psychological Medicine. There are also 6 honorary lecturers in special subjects, 5 honorary demonstrators in Anatomy, as well as a medical tutor and surgical tutor.

The Faculty of Science comprises professorships in Chemistry, Physics, Geology and Physical Geography, and Biology, with lecturers in Palæontology, Embryology, and Physiography, and demonstratorships in all the professorial subjects. The Faculty of Science also includes the Department of Engineering, in which there are a professor of Civil Engineering, separate lectureships in Mechanical Engineering, Electrical Engineering, Surveying, Mining, Metallurgy, and Architecture, with demonstratorships in the Engineering subjects, as well as a demonstrator in Metallurgy, who acts as assistant to the professor in Chemistry.

From the foundation of the University to the end of 1905, 2,539 degrees of various kinds have been conferred, the highest number bestowed in any one year being 153 in 1893. Of the total number, 2,539, male graduates obtained 2,230, and females 309. The degrees conferred include 330 M.A., 1,241 B.A., 25 LL.D., 128 LL.B., 50 M.D., 313 M.B., 222 Ch.M., 3 D.Sc., 57 B.Sc., 5 M.E., 148 B.E., and 17 L.D.S. During 1905 the degrees conferred (including *ad eundem*) were M.A. 9, B.A. 43, LL.B. 9, M.D. 2, M.B. 30, Ch.M. 16, D.Sc. 2, B.Sc. 6, M.E. 1, B.E. 19. Nine students, 8 males and 1 female, received the degree of L.D.S in the Dentistry Course. The number of matriculated students increased from 34 in 1876 to 756 in 1905.

Examinations, corresponding to the middle-class examinations of the English Universities, are held every year. These examinations proved highly popular, attracting no less than 2,305 candidates in 1892, of whom 173 were seniors and 2,132 juniors; but in succeeding years the numbers fell away considerably, so that, in 1900, there were only 108 senior candidates and 980 juniors. During the last four years, however, there has been a considerable increase, the number of senior candidates having risen in 1905 to 161, and the juniors to 1,265.

Since the institution, in 1897, of the Public Service Board's examinations for junior clerks for the Civil Service, about 250 candidates are examined annually who otherwise might have competed at the various University examinations.

Year.	Students attending Lectures.	Matriculated Students.	Attending Extension Lectures.	Public Examinations.			
				Number of Seniors.		Number of Juniors.	
				Examined.	Passed.	Examined.	Passed.
1876	58	34	...	53	40	356	212
1886	203	122	137	107	83	858	548
1896	454	438	396	142	108	1,481	965
1900	583	530	641	108	85	980	641
1901	657	574	720	122	95	1,060	697
1902	730	667	475	119	99	1,109	724
1903	777	724	1,015	142	124	1,153	791
1904	820	750	1,565	130	117	1,254	853
1905	948	756	1,610	161	133	1,265	879

Examinations for the admission of articled clerks were instituted in 1877, in compliance with a rule of the Supreme Court, and in 1905 there were 23 successful candidates.

Below is given a statement showing the amount derived by the University from each of the principal sources of revenue, at intervals since 1876, the total expenditure during each year being also shown :—

Year.	Receipts.					Expenditure.
	Government Aid.		Lecture fees.	Other sources.	Total.	
	Endowment.	Grants for apparatus or other special purposes.				
	£	£	£	£	£	£
1876	5,000	....	403	100	5,503	5,877
1886	12,000	5,500	2,600	323	20,423	20,765
1896	9,000	2,400	8,171	11,923	31,494	31,557
1900	9,000	3,583	9,836	14,336	36,755	34,769
1901	9,000	800	11,619	14,347	35,766	37,130
1902	9,000	3,317	11,950	15,387	39,654	42,690
1903	10,000	5,533	13,338	16,815	45,686	44,348
1904	10,000	3,500	14,171	16,965	44,636	43,430
1905	10,000	3,250	15,309	18,524	47,083	47,599

An extensive addition to the University's magnificent buildings has been made for the use of the School of Medicine. It provides the most complete accommodation for students desiring to follow the profession of medicine and surgery; and the Prince Alfred Hospital, erected, as before stated, on the University grant, affords them the necessary means of study. During the year 1905 there were 286 undergraduates, of whom 19 were women, in the Medical School. This branch of the University was established in 1883, when there was an enrolment of 4 students. A laboratory for the Department of Physics has also been erected, and is replete with every means of illustrating the teaching of physical science. In March, 1890, a Department of Chemistry and its adjuncts were opened. The accommodation provided includes lecture halls and four laboratories, besides other facilities. One of the laboratories is used in connection with the School of Mines, which was opened early in 1895 for the purpose of imparting instruction in geology (including physical geography and palæontology), mineralogy, and practical mining work. The buildings for the School of Mines cost upwards of £4,000, and more than £1,500 was expended on fittings. In the various branches of the Department of Engineering, there was an enrolment of 80 students during the year.

A School of Dentistry was established in 1901. The course of instruction, which extends over a period of four years, aims at giving a thorough insight into the surgical and mechanical divisions of the profession. Intending students must have passed the ordinary University matriculation examination or its equivalent before being admitted to the College. The undergraduates attending in 1905 numbered 45, including 2 female students.

DENOMINATIONAL HIGH SCHOOLS AND COLLEGES.

All the principal religious bodies provide high schools and colleges where students may be educated according to the precepts of their various beliefs, and prepared to compete for University honours or the various professions which they may adopt. Evidence of the progress of superior denominational education in the State may be seen in the magnificent college buildings which surround the city, among which may be cited Newington College, the colleges of the Marist Brothers and the Jesuit Fathers at Hunter's Hill and Riverview, the old-established King's School at Parramatta, the North Sydney Church of England Grammar School, the Scots' College, the Presbyterian Ladies' College at Croydon, and a host of other first-class establishments erected under the patronage of the various religious bodies. With regard to the teaching in these institutions, however, it must be admitted that while the classical side receives considerable attention, instruction in science is as yet in a very rudimentary stage, and is on a much lower plane than that given in similar institutions in other parts of the world.

TECHNICAL EDUCATION.

Public attention was so strongly directed, in the years which followed the great world exhibition of 1851, to the necessity of providing the artisan classes and the people generally with the means of obtaining a scientific knowledge of the various handicrafts, that technical schools sprang up in various parts of England, some being under the direct patronage of the State, whilst others were founded by the wealthy trade societies or guilds of the great English cities. The excellent results following the establishment of these schools could not fail to attract attention in these States, where a sound and practical knowledge of the manual arts is of paramount necessity. The foundation of the New South Wales Technical School was due in great measure to the efforts of a few gentlemen connected with the Sydney Mechanics' School of Arts, and as far back as 1873 it was decided to establish a Technical College affiliated to that institution, with the object of improving the scientific knowledge of Australian artisans. In the year 1878 a sum of £2,000 was granted by Parliament towards the organisation of a Technical College, and for five years the work of the institution was carried on in connection with the School of Arts. In 1883 however, a board was appointed by the Government to take over its management, and the Technical College became thenceforth a State institution. Towards the end of 1899, the Board was dissolved, and the Technical College came under the direct control of the Minister of Public Instruction. The institution is now well established, and its work is already being felt and appreciated, whilst the future gives every promise of still greater usefulness. The College is housed in a fine building specially erected by the Government at Ultimo, Sydney, and was opened for the reception of students in January, 1892. Besides being provided with workshops containing the necessary machinery, tools, and apparatus, the College possesses an excellent museum, open to the public as well as to students.

The course of instruction, under the present constitution of the College, comprises classes in agriculture, art, architecture, carpentry, &c., chemistry, cookery, dressmaking, geology, and mineralogy, iron founding, mechanical engineering, physics, printing, sanitary engineering, electrical engineering, lithography and photo-lithography, mine surveying, metalliferous mining, wood and stone carving, and wool sorting and other training in connection with sheep and wool; and these classes are subdivided as may be warranted by circumstances. At present it is found that the accommodation at the institution for some of the classes is quite inadequate, and the early extension of operations will shortly have to be provided for. While some fine research work has been carried on in connection with eucalyptus products, &c., at the Technological Museum, it has come to be recognised that the industrial technical side in particular is on a rather low plane, and efforts are being put forward in the direction of attaining a much higher standard.

The College is open to both male and female students, and in 1905 there were 625 classes in operation, of which 175 were in Sydney and suburbs, 274 in various country towns, and 176 in connection with public schools. The teaching staff consisted of 10 lecturers in charge of departments, 7 resident masters in charge of branch schools, 70 teachers, 34 assistant teachers, and 123 teachers remunerated by fees only. The enrolment of students amounted to 14,855 in all, 6,349 of whom were in Sydney and suburbs, and 4,030 in the country, while 4,476 represented the enrolment of scholars from public schools. The number of individual students was 11,626. The average weekly attendance was 9,847. Technical College buildings were opened at Newcastle in February, 1896; at Bathurst in June, 1898, and at Albury in 1899.

In 1905 the State expenditure on technical education amounted to £25,262, but this sum does not include the expenditure on the Technological Museum and branches.

In addition to the technical instruction given in the various technical colleges and schools, it may be noted here that the Sydney Chamber of Commerce has instituted examinations at which candidates may gain certificates of competency in commercial education, while the Institute of Bankers conducts entrance and diploma examinations.

REFORMATORIES AND INDUSTRIAL SCHOOLS.

In addition to the purely educational establishments, the State maintains several reformatories and industrial schools. For girls there is the Industrial School at Parramatta; and for boys, the nautical schoolship "Sobraon" and the Carpenterian Reformatory. All these institutions are under the control of the Minister of Public Instruction. At the Parramatta Industrial School the enrolment of girls during the last quarter of 1905 was 102, of whom 17 were under and 85 over 14 years of age. The cost of maintaining the school in 1905 was £2,520.

The Carpenterian Reformatory, opened in 1895, is situated on portion of the Brush Farm Estate, which was acquired by the Government in the early part of 1894. To this institution are sent boys who have been convicted in the lower or higher Courts, and whom it is desired to keep apart from such persons as they would have to associate with if sent to gaol. In addition to being subjected to proper discipline, the boys are taught farming, wood-turning, carpentering, cabinet-making and french polishing, bootmaking, tailoring, tinsmithing, painting and glazing, and jam making and fruit preserving. At the end of 1905 there were 135 lads housed in the Reformatory, of whom 34 were under 14 years of age. The net State expenditure on this institution amounted to £2,465. Since its inception the institution has dealt with 635 boys, and of the 500 discharged it is estimated that fully 85 per cent. have turned out good industrious citizens.

On the "Sobraon" 572 boys were dealt with during the year 1905. The admissions during the year numbered 165, and the discharges 148. On the 31st December, 1905, there were 424 boys remaining on board. During thirty-nine years, the institution has dealt with about 5,300 boys, and the records show that about 98 per cent. of these have developed into good citizens. The net cost to the State during 1905 was £10,021, the cost per head of enrolment being £17 10s. 4d. The steam and sailing schooner "Dart" is also attached to the "Sobraon," and on board this vessel the boys are taught seamanship, being also afforded opportunities of putting their knowledge into practice by an occasional trip to sea. So successful has the experiment been that a number of boys have been shipped as sailors on deep-sea vessels. The great advantage which the "Sobraon" system possesses over the ordinary penal system of the State lies in the fact that the boys who have been subjected to a course of training on board the vessel are not turned adrift on society at the expiration of their term, but are apprenticed to persons of well-known character, and have every opportunity of becoming respectable members of the community. That they do become such is evidenced by the fact alluded to above that very few lads apprenticed from the "Sobraon" lapse intc crime and find their way into gaol.

Further reference is made to Industrial Schools in the Chapter on "Social Condition."

OBSERVATORY AND SCIENTIFIC SOCIETIES.

The Sydney Observatory is numbered among the institutions of a scientific and educational character which the State liberally supports. Situated in a commanding position, it is admirably fitted for the purposc it is intended to serve. The present building was erected in 1856, at the instance of Sir William Denison, then Governor of the Colony, who took a great interest in scientific pursuits. Meteorological observations have received special attention, as befits such an important subject in a country whose prosperity depends so much upon climate. In 1870, there were in the State only six stations, and observations on the climate, rainfall, and other meteorological phenomena were necessarily very limited in character. At the end of 1905 the number of stations had been increased to 1,928. Weather charts and forecasts, based on telegraphic information received from the other States and New Caledonia, are issued twice daily. Rain gauges have also been established at most of the sheep and cattle stations of the interior, with a result which is highly satisfactory. The light thrown on the true characteristics of the climate, especially of that part of the State remote from the sea coast, has tended to modify the notion long current as to its unfitness for agricultural as well as pastoral settlement. The Observatory is open to the public once a week, and during 1905 the total number of visitors was 1,405.

In a young country such as New South Wales, where most of the people are engaged in the development of its material resources, the existence of a leisured class, or one devoted to the pursuits of science, is hardly to be looked for. Nevertheless, it is satisfactory to find that the higher aims of science are far from being neglected. As far back as the year 1821 a scientific society under the title of the Philosophical Society of Australasia was founded in Sydney, and after experiencing many vicissitudes of fortune was transformed in 1866 into, and afterwards incorporated under the title of, the Royal Society of New South Wales. The society is now in a flourishing condition, counting amongst its members some of the most eminent men in the State. Its objects are the advancement of science in Australia, and the encouragement of original research in all subjects of scientific, artistic, and philosophical interest, which may further the development of the resources of Australia, draw attention to its productions, or illustrate its natural history. The proceedings include papers of the greatest interest on important scientific questions, especially those whose solution is of Australian interest.

The study of the botany and natural history of Australia has attracted many enthusiastic students, and the Linnæan Society of New South Wales was established for the special purpose of furthering the advancement of these particular sciences. The society is housed in a commodious building at Elizabeth Bay, one of the most beautiful spots near the city, and possesses a library and museum. It was liberally endowed by Sir William Macleay, who, not content with being one of its most munificent supporters, was also an indefatigable worker in the field of science. The society's proceedings are published at regular intervals, and contain many valuable papers, together with excellent illustrations of objects of natural history.

Among the other scientific societies are the New South Wales Zoological Society, inaugurated in 1879; a branch of the British Medical Association, founded in 1881; a branch of the British Astronomical Association, whose first meeting was held in 1895; and a branch of the Anthropological Society of Australasia. The Australasian Association for the Advancement of Science, and the Royal Geographical Society of Australia, also have branches in New South Wales as well as in the other States.

PUBLIC LIBRARIES.

The Public Library of New South Wales was established, under the designation of the Free Public Library, on the 1st October, 1869, when the building and books of the Australian Subscription Library were purchased by the Government. The books thus acquired formed the nucleus of the present library. The number of volumes originally purchased was about 16,000, and on the 31st December, 1905, they had been increased to 174,585, including those in the lending branch or lent to libraries or private students in the country. The lending branch was established in 1877 to meet a growing public want, and under the present system any person may, on the recommendation of a clergyman, magistrate, or other responsible person, obtain under certain simple regulations the loan of any of the works on the shelves, free of charge. The scope of this institution was further extended by the introduction of a system by which country libraries and Mechanics' Institutes may obtain on loan works of a select kind, which in many instances would be too expensive for them to purchase on account of the slender funds at their disposal. Under this system boxes are made up containing from 60 to 100 books, and forwarded to the country libraries on application, to be returned or exchanged within four months. This system was initiated in August, 1883, and has been carried on successfully ever since. In the course of the year 1905, 10,655 volumes were forwarded to 155 institutions, some of which were at considerable distances from the metropolis. Further, 1,216 volumes were sent to 13 different lighthouses, and 636 volumes were lent to 105 individual students in the country during the year. Students are expected to pay return freights on parcels, but all the other charges in connection with the despatch and return of the books are defrayed by the State, and the system in vogue in New South Wales is the most liberal of its kind in existence.

The reference department of the Public Library of New South Wales contains 139,342 volumes, and the lending branch 29,121, while there are also 6,122 volumes for country libraries to be lent under the abovementioned system, the total number of books and pamphlets, the property of this institution, being 174,585, classified as under :—

Synopsis of Classification.	Reference Department.	Lending Branch.	For Country Libraries.	Total.
Natural Philosophy, Science, and the Arts	15,633	4,742	467	20,842
History, Chronology, Antiquities, and Mythology	8,357	4,060	915	13,332
Biography and Correspondence	6,310	4,467	1,100	11,877
Geography, Topography, Voyages and Travels, etc.	7,741	3,745	913	12,399
Periodical and Serial Literature	34,749	....	252	35,001
Jurisprudence, Political Economy, Social Science, etc.	7,154	1,407	317	8,878
Theology, Moral and Mental Philosophy, and Education	7,040	1,910	121	9,071
Poetry and the Drama	3,750	975	132	4,857
General Literature, Philology, and Collected Works *	7,398	7,815*	1,899	17,112
Works of Reference	4,626	....	6	4,632
Duplicates	5,523	....	....	5,523
"Mitchell" Library	10,429	....	....	10,429
Classified according to the Dewey System—				
0. General Works	2,270	....	....	2,270
1. Philosophy	419	....	....	419
2. Religion	859	....	....	859
3. Sociology	5,586	....	....	5,586
4. Philology	196	....	....	196
5. Natural Science	2,062	....	....	2,062
6. Useful Arts	3,250	....	....	3,250
7. Fine Arts	1,082	....	....	1,082
8. Literature	1,715	....	....	1,715
9. History (including Biography and Travel)	3,193	....	....	3,193
Total	139,342	29,121	6,122	174,585

* Including 4,958 volumes of Fiction.

The popularity of the Public Library of New South Wales is clearly proved by the number of persons availing themselves of the privileges which it affords. The increase has been very regular, rising from 237,170 in 1895 to 312,733 in 1905, 137,704 of which were visits to the lending branch. The following table shows the number of visits paid to the Library during the last ten years. It should be noted, however, that the figures cannot be taken as in every sense a test of either the popularity of the Library or the reading habits of the community, as a shower of rain drives the habitués of the surrounding parks to seek the shelter which is conveniently afforded by the Library and Art Gallery:—

1896	255,058	1901	330,945
1897	256,318	1902	303,901
1898	262,315	1903	316,759
1899	289,919	1904	304,254
1900	287,429	1905	312,733

Besides the 312,733 visits recorded for 1905, no less than 351,890 were paid to the newspaper room. Although the lending branch contains but 29,121 volumes, the total number of times when books were issued during the year was not less than 138,896, and the number of persons availing themselves of the privilege of borrowing was 9,687; so that on an average the books were taken out nearly five times, and each person to whom a permit was granted used over fourteen volumes during the year. As usual, works of fiction were extensively read, the 4,958 novels in the branch having been issued, on an average, over fifteen times each during the year. The number of volumes of each class taken out was as follows:—

Synopsis of Classification.	No. of volumes used.
Natural Philosophy, Science, and the Arts	16,252
History, Chronology, Antiquities, and Mythology	9,556
Biography and Correspondence	8,925
Geography, Topography, Voyages and Travels, etc.	7,961
Jurisprudence, Political Economy, Social Science, etc.	2,885
Theology, Moral and Mental Philosophy, and Education	5,084
Poetry and the Drama	2,709
General Literature, Philology, and Collected Works	6,518
Prose Fiction	79,006
Total	138,896

During 1886 and 1887 considerable extensions were made to the premises of the Public Library of New South Wales, which had become much too small for the accommodation of the public, and the proper housing of the books. It was at length decided to pull down the old building in Macquarie-street, and a contract was made about the middle of 1887 for rebuilding a large portion of the Library at a cost of £10,455. The new building was opened to the public in April, 1890; and the Public Library of New South Wales is now one of the most convenient in Australia. In July, 1899, it was found advisable to remove the Lending Branch of the Library from the old building in Macquarie-street to a more central position in the Queen Victoria Market buildings. In December, 1899, the Library was incorporated, and received a statutory endowment of £2,000 per annum for the purchase of books. The Library has also benefited by the munificence of Mr. D. S. Mitchell, M.A., who in 1899 made a donation of over 10,000 well-chosen volumes, together with 50 valuable pictures, and at the same time intimated his intention of bequeathing the whole of his unrivalled Australian collection, and of providing an adequate endowment. The collection will be kept separate, and known as the "Mitchell" Library; and the Government is proceeding with the erection of a fine structure to accommodate it on a splendid site in the Outer Domain.

The cost of the Public Library to the State during 1905 was £8,944, the details of expenditure being as follows:—

	£
Books, Periodicals, and Binding	1,688
Salaries	5,996
Miscellaneous—Cleaning, Freight, Repairs, &c.	1,260
Total	£8,944

The administration of the Copyright Act, the editing of the Historical Records of New South Wales, and the administrative work in connection with the Board for International Exchanges are also performed by the Library staff.

Besides the Public Library, which is situated in Sydney, there are smaller libraries established in the principal population centres throughout the State. These libraries may be broadly classed under two heads—Schools of Arts, receiving an annual subvention in proportion to the amount of monetary support accorded by the public; and Free Libraries, established in connection with municipalities. Those of the former class are far the more numerous. Under the provisions of the Municipalities Act of 1867, any municipality may establish and maintain a Free Library, and where such is done the Council of the Municipality is entitled, for the purchase of books, to the sum of £200 if the library is available for the use of a population of 1,000, or to £100 where the population to whom the library would be accessible reaches 300 persons. The number of public libraries in the State is about 400, and these contain, approximately, 500,000 volumes. In addition, there are a large number of private circulating libraries, which are extensively patronised, while libraries with a total of 130,973 volumes have been established in connection with 1,153 State schools.

NATIONAL ART GALLERY.

The National Art Gallery was opened in June, 1876, in connection with the New South Wales Academy of Art (established in 1871). It was reopened as the National Art Gallery in 1880 in temporary buildings in the Sydney Botanic Gardens, and is now situated in the Outer Domain, in a convenient and well-lighted building, which has received recent additions, but is yet incomplete. The Gallery contains an excellent collection of paintings and statuary, comprising some of the most famous works of the best modern artists of the old world, and includes several very valuable gifts from private persons. The collection of Water Colours is considered to be the finest out of England. It is estimated that the present value of the contents of the Gallery is not less than £128,000. Like the other national institutions of New South Wales, the Gallery is open on Sundays as well as week-days, and on Sundays and public holidays the attendance is especially numerous. During 1905 the Gallery was visited by 297,629 persons, the average Sunday attendance being 1,985, and on week-days 657. Under certain regulations, art students are admitted to the Gallery for the purposes of study, and the total number registered in 1905 was 419. In 1894 a system of loan exchanges between the Art Galleries of Sydney, Melbourne, and Adelaide was introduced. By this arrangement pictures are sent from Sydney to Melbourne and Adelaide, and others are received from the Art Galleries of th
cities in exchange. That the interests of art have benefited under
system is unquestionable. Another excellent scheme was initiated
July, 1895, by which collections of pictures belonging to the Art Gal
and the Art Society are made up and sent to the principal country to
for temporary exhibition. Up to the end of 1905, the total expenditu

on the National Art Gallery was £141,987, of which the sum of £97,158 had been expended on works of art. The disbursements during 1905 were:—

	£
For works of art	918
For maintenance, including freight, frames, repairs, and insurance	1,103
For salaries	2,011
Total cost to the State	£4,032

MUSEUMS.

The Australian Museum, the oldest institution of the kind in Australia, occupies a conspicuous site in the centre of Sydney, facing one of the principal parks. After its foundation in 1836, it was connected for some time with the Botanic Gardens, and was located in Macquarie-street. Subsequently it was removed to the Surveyor-General's Office, and finally, in 1849, to its present position. The collections contain carefully-selected specimens of the principal objects of natural history found in such establishments, and also a most complete collection of zoological specimens of distinctly Australian character. The popularity of the institution is evinced by the increasing number of persons by whom it is visited. The Museum is open to the public every day except Monday, and on Sundays the visitors are very numerous. The number of visitors during 1905 was 135,133, the daily average being 555 on Sundays, and 397 on other days. The expenses in connection with the institution amounted to £7,684, of which £1,873 was expended on account of purchase, collection, and carriage of specimens, and purchase of books. A fine library, containing many valuable publications, is attached to the Museum. The specimens acquired during 1905 numbered 13,610.

The Technological Museum, formerly situated in the Outer Domain, is now housed in a fine building at Ultimo. This museum was instituted at the close of 1879 on the initiative of the Trustees of the Australian Museum; but the whole collection of some 9,000 specimens was totally lost in 1882 by the Garden Palace fire. Strenuous efforts were at once made to replace the lost collection, and in December, 1883, the museum was again opened to the public, and now contains interesting and valuable series of specimens illustrating the various stages of many manufactures, and an excellent collection of natural products. The popularity of the institution may be gathered from the fact that 100,137 persons visited it during 1905.

There are branch Technological Museums at Goulburn, Bathurst, West Maitland, Newcastle, and Albury, which were visited by 134,084 persons during 1905. The sum of £3,962 was expended on the various institutions of this nature (including the one in Sydney) during 1905.

Connected with the Department of Mines and Agriculture is a Mining and Geological Museum, housed in an iron building in the Outer Domain. The museum is open to the public on week-days, admission being free. Amongst other important work, the institution prepares collections of minerals to be used as teaching aids in the public schools.

In the same building there is an Agricultural and Forestry Museum, containing over 6,000 specimens. This museum is also open to the public free of charge.

The "Nicholson" Museum of Antiquities, the "Macleay" Museum of Natural History, and the Museum of Normal and Morbid Anatomy, attached to the Sydney University, are also accessible to the public free of charge.

RELIGION.

In the eyes of the State, all religions are equal in New South Wales, but during the early days of the State's history such was not the case. New South Wales was originally a Crown Colony, and the Church establishment as it existed in England was naturally transplanted to these shores. Ecclesiastical monopoly, nevertheless, only continued for a short time, and the countenance and support of the State were eventually extended, during the governorship of Sir Richard Bourke, to the principal religious bodies which then existed—the Anglicans, Roman Catholics, Presbyterians, and Wesleyan Methodists. To the clergy of each of these denominations the Government granted what has usually been denominated State aid, which continued long after the old political system had passed away and had been replaced by Responsible Government. In 1862, however, an Act was passed limiting future payments to the clergy then actually in receipt of State aid. In the year following the passing of this Act, the claims on the Government amounted to £32,372, thus distributed:—

Church of England	£17,967	Presbyterian	£2,873
Roman Catholic Church...	8,748	Wesleyan Methodist	2,784

Year by year the sum payable has been lessening, owing chiefly to the deaths of clergymen in receipt of State aid, so that during the year ended June, 1906, the payment by the State was £2,316, distributed as follows:—

Church of England	£1,189	Presbyterian	£300
Roman Catholic Church	650	Wesleyan Methodist	177

The payments to the clergy of different denominations are given for various periods since 1863. It will be observed that in some years the amounts paid were less than in succeeding years. This anomaly is due to the temporary stoppage of the stipends of clergymen who were absent from the State:—

Year.	Church of England.	Roman Catholic Church.	Presbyterian.	Wesleyan Methodist.	Total—All Denominations.
	£	£	£	£	£
1863	17,967	8,748	2,873	2,784	32,372
1891	5,347	2,570	702	875	9,494
*1895	1,920	1,023	351	438	3,732
1895–6	3,824	1,976	569	687	7,056
1896–7	3,537	1,888	552	750	6,727
1897–8	2,881	1,696	552	734	5,863
1898–9	2,600	1,435	552	534	5,121
1899–1900	2,283	1,375	552	450	4,660
1900–1	2,141	1,178	512	450	4,281
1901–2	2,116	1,000	475	438	4,029
1902–3	1,552	896	281	307	3,036
1903–4	1,431	603	300	300	2,634
1904–5	1,431	575	300	300	2,606
1905–6	1,189	650	300	177	2,316

* Six months.

The number of ministers of religion entitled to State aid during 1905 was 13—7 clergymen of the Church of England, 3 Roman Catholics, 2 Presbyterians, and 1 Wesleyan Methodist.

At the Census of 1901 the number of adherents to each of the denominations, with the clergy registered for the celebration of marriages, was as given below. The table also shows the average number of adherents to each denomination compared with the number of clergymen in active service:—

Denomination.	Clergy.	Adherents.	Proportion of adherents to clergy.
Church of England	363	623,131	1,717
Roman Catholic	299	347,286	1,162
Presbyterian	182	132,617	729
Methodist	200	137,638	688
Baptist	37	16,618	449
Congregationalist	51	24,834	467
Lutheran	5	7,387	1,477
Salvation Army	10	9,585	958
Unitarian	1	770	770
Other Christian	27	13,635	505
Jew, Hebrew	4	6,447	1,612
Mahometan	......	1,072	......
Buddhist, Confucian	......	5,471	......
Hindoo, Brahmin, Sikh	......	468	......
Other non-Christian	......	1,024	......
Freethinker, Agnostic	......	3,434	......
Indefinite	......	130	......
No denomination, no religious profession	......	4,623	......
No religion	......	1,642	......
Object to state	......	13,068	......
Unspecified	......	3,966	......
Total	1,179	1,354,846	......

Taking the whole population (less aborigines), there were 1,149 persons on an average to each clergyman.

From the figures just given full-blooded aborigines and half-castes living in a nomadic state, to the number of 4,287, have been excluded.

Formerly, religious statistics were collected every year. It has now been decided to have only one collection half way between the Census periods, so that new figures will be available every five years. The figures given below refer to the year 1904, when the latest collection was made. In that year the number of persons of 14 years of age and over attending Divine Service on Sundays averaged 385,627. When the sparseness of the population in some parts of the country is considered, the church attendance will appear fairly satisfactory. In 1881 the Church of England had the largest attendance, but from 1884 the Church of Rome has taken the lead.

The figures showing the attendance at Divine Service on Sundays for each of the principal denominations are given hereunder, but too much reliance cannot be placed on the results, as it has been found difficult to secure thoroughly complete returns. It must be remembered, also, that the totals for each denomination include attendants other than actual adherents. This is especially the case as regards the Salvation Army, which showed an attendance of 16,000 persons at Sunday services, while the total members of this religious persuasion at last census numbered only 9,585.

Denomination.	Estimated number of persons over 14 years of age attending Divine Service on Sundays.	Total number attending Divine Service on Sundays.
Church of England	94,877	116,833
Roman Catholic	104,829	136,077
Methodist	93,655	113,705
Presbyterian	50,816	62,998
Congregational	11,707	14,200
Baptist	8,470	10,183
Salvation Army	16,000	19,350
Other Denominations	5,773	7,465
Total	385,627	480,811

The Church of England is the largest religious denomination in the State, whether judged by the number of professed adherents, the number of clergy, or the number of buildings used for Divine Service. During the year 1904 there were 791 churches belonging to this denomination, and 893 buildings and dwellings used for public worship, accommodating altogether 143,103 persons. The estimated number of attendants at Public Worship on Sunday, including children under 14 years of age, was 116,833, and, exclusive of children, 94,877. In 1905 the number of clergy registered for the celebration of marriages was 391. The Church of England in the State is governed by a Metropolitan, the Archbishop of Sydney, who is Primate of Australia and Tasmania, and five other Bishops, whose sees are Newcastle, Goulburn, Bathurst, Grafton and Armidale, and Riverina. By an Act passed in 1881 provision was made for the creation of corporate bodies of trustees, in which property belonging to the Church of England may be vested, and trusts for various dioceses have been formed under the Act. They are entitled to hold, on behalf of the Church, all real and personal property which may be assigned to them by grant, will, or otherwise.

The Roman Catholic Church is presided over by the Cardinal Archbishop of Sydney, assisted by a Coadjutor Archbishop, under whom are the suffragan bishops of Maitland, Goulburn, Bathurst, Armidale, Wilcannia, and Lismore, the whole State forming an ecclesiastical province. No fewer than thirty-three religious orders are represented in the State. In 1905 there were 340 priests licensed to celebrate marriages. The number of Roman Catholic churches was 576; besides these, there were 709 buildings or dwellings used for Divine Service. The accommodation afforded by the churches and buildings amounted to 135,063, and the attendance of adherents of 14 years of age and over was 104,829, while the total number of attendants of all ages was 136,077.

The various branches of the Presbyterian Church in the State had, during 1904, 362 churches used for public worship; there were also 705 public buildings or dwellings occasionally used for the same purpose. The number of ministers licensed to celebrate marriages is 201, of whom 194 were connected with the Presbyterian Church of New South Wales, 5 with the Presbyterian Church Synod of Eastern Australia, and 2 with the Presbyterian Church of Eastern Australia reconstituted Synod. The accommodation provided in churches and buildings was 58,275 sittings, and the attendance of habitual adherents numbered about 50,316, and, including children, 62,998. For the purposes of this Church, the State is divided into fourteen Presbyteries, each comprising a number of separate charges, to each of which a Minister is appointed. The management of the affairs of the Church is controlled by a General Assembly, which sits annually, and consists of Ministers and Elders from the charges within the different Presbyteries. It is presided over by a Moderator, who is elected by the Presbyteries, who also nominate representatives to the Federal Assembly. The first Assembly of the Presbyterian Church of New South Wales was held in 1865. By Act of Parliament the Assembly has power to grant permission to trustees to mortgage Church property, and trustees are authorised to hold property for the Church generally. In July, 1901, a scheme of federal union was adopted by representatives from the various States; and the united church is called the Presbyterian Church of Australia.

On the 1st January, 1902, the Wesleyan Methodist Church, the Primitive Methodist Church, and the United Methodist Free Churches in New South Wales entered into organic union, with a common name, common funds, common laws, and equal rights. The name given to the United Church was "The Australasian Wesleyan Methodist Church," but it was arranged that when the union has become general throughout Australasia the Church shall be known as "The Methodist Church of Australasia."

Altogether the Methodist body possesses 572 churches and 548 other buildings used for public worship, with sitting accommodation for 95,334 persons. The estimated attendance on Sundays was 93,655, or, including children, 136,077. In 1905 the clergy licensed to celebrate marriages numbered 195.

The Congregational Church has 79 churches, as well as 49 buildings or dwellings used for worship; and the sittings provided will accommodate 21,458 persons. The clergy licensed to celebrate marriages number 56, and the attendance at Divine Service on Sundays averages 11,707, or, including children, 14,200.

The various Baptist Churches in the State have 37 licensed ministers, with 59 churches and 69 other buildings devoted to public worship; the Sunday attendance averages 8,470, and, including children, 10,183 persons. The Baptist Union of New South Wales is not incorporated, and so cannot legally hold property in trust for the denomination. Annual sessions, with half-yearly assemblies, are held, the chair being taken by the President, who is elected annually. For several sessions a draft constitution was under the consideration of the Union, which, amongst other matters, provides that all properties which now belong or may hereafter accrue to the Union shall be held under a Model Trust Deed, by trustees to be duly appointed. The matter of incorporation remains in abeyance.

The Salvation Army was established in Australia in 1882. Melbourne was made the chief centre for Australasia under the command of a Commissioner, and Sydney was constituted the headquarters for New South Wales, with a separate chief officer, who is termed Colonel-in-command, all officers and members bearing military titles and designations. The various ranks are Commissioner, Colonel, Brigadier, Major, Staff-Captain, Adjutant, Ensign, Captain, Lieutenant, and Cadet. The rank and file consist of sergeant-majors, sergeants, and soldiers. There are also treasurers and secretaries to corps. Persons who are in sympathy with the Salvation Army, but who have not subscribed to the "Articles of War"—which combine a confession of faith and a pledge against the use of intoxicating liquors and baneful drugs—form an Auxiliary League and contribute to the funds of the Army. Persons desirous of membership are publicly received, after one month's probation and having signed the "Articles of War," and are then attached to the corps nearest their place of residence. The Army has only 8 officers licensed to celebrate marriages, but has 337 buildings used for service, accommodating 45,000 persons. The number of persons attending public worship on Sundays is estimated at 16,000, or, including children, 19,350.

Besides those above enumerated, there are other distinct religious bodies, for the most part Protestant denominations, with clergy licensed by the State to celebrate marriages. The number of clergy ministering to these in 1904 was 47; the churches and other buildings used for Divine Service numbered 101; and the attendance was about 6,000 persons.

The number of registered ministers belonging to all faiths was 1,313, and the churches numbered 2,612, in addition to which there were 3,238 dwellings or other buildings used for public worship. Accommodation was provided for 526,897 persons. The average attendance on Sundays was about 385,627, or, including children under 14 years of age, 480,811 persons.

Nearly all the religious bodies maintain Sunday-schools. The attendance of children at the Sunday-schools of the leading denominations, with the number of schools and teachers during 1904, was:—

Denomination.	No. of Schools.	Teachers.			Scholars on the Roll.			Estimated Average Attendance.
		Males.	Females.	Total.	Males.	Females.	Total.	
Church of England..........	761	1,342	3,473	4,815	26,492	34,505	60,997	43,025
Roman Catholic	639	229	1,271	1,500	15,879	21,245	37,124	29,505
Methodist	489	1,522	3,173	4,695	18,819	22,881	41,700	27,697
Presbyterian	320	754	1,461	2,215	9,421	12,059	21,480	15,331
Congregational	82	357	530	887	3,675	4,844	8,519	5,987
Baptist	57	254	293	547	2,290	2,922	5,212	3,834
Salvation Army	124	179	300	479	2,500	3,000	5,500	3,980
Other Denominations.........	61	144	243	387	1,436	2,319	3,755	2,875
Total......................	2,533	4,781	10,744	15,525	80,512	103,775	184,287	132,234

The attendance shown in the preceding table amounts to about 45 per cent. of the total children between the ages of 7 and 15 years, inclusive, at which ages children generally attend Sunday-schools. The number of Sunday-schools and teachers, and the attendance at various intervals since 1891, were as follows:—

Year.	Number of schools.	Number of teachers.	Average attendance of Scholars.		
			Male.	Female.	Total.
1891	1,887	12,169	54,932	68,592	123,524
1894	2,049	13,131	47,552	61,949	109,501
1897	2,167	13,748	55,960	72,420	128,380
1900	2,286	14,607	55,942	74,595	130,537
1904	2,533	15,525	57,320	74,914	132,234

CONSTITUTION AND PARLIAMENTS.

RESPONSIBLE Government in New South Wales dates from the year 1855. Prior to this the State was a Crown Colony, the Governor having virtually autocratic powers, and being responsible for his actions solely to the Colonial Office in London. The Act of 1855 has since been amended in various particulars, and the present form of Government is briefly as follows:—

THE GOVERNOR.

The Governor is the representative of the Crown, and is appointed by the Imperial Authorities, the term of office being five years. The Constitution provides for a salary of £5,000 per annum, and allowances for the Governor's staff amount to about £800 annually, these sums being provided by the New South Wales Government. The Imperial Government provides a sum of £800 each way for expenses on the outward and homeward voyages. The present Governor is Admiral Sir Harry Holdsworth Rawson, K.C.B. During the absence of the Governor, the duties of administration devolve on a Lieutenant-Governor, the present occupant of the office being the Hon. Sir F. M. Darley, Chief Justice of the State. Should both the Governor and the Lieutenant-Governor by any means be incapacitated from holding office, the duties are performed by the Senior Judge of the Supreme Court.

The powers and privileges of the Governor are set forth at considerable detail in his Commission, but space will permit of only the briefest reference here to the principal of them. As representative of the Crown, the Governor has power to assent to various Acts of Parliament, or to withhold the assent pending reference to the Home Government. There are certain classes of bills, however, to which he is bound to refuse Royal assent, these being specially mentioned in his Commission. The Governor may summon and appoint his own Executive Council. He also has power to appoint Judges, Justices of the Peace, Commissioners, and other necessary officers and Ministers, and by virtue of his office may remove these officials from their positions. The prerogative of mercy is vested in the Governor, but this power is never exercised except with the advice of the Executive.

The Governor also is empowered to nominate the members of the Upper House, and to summon, prorogue, or dissolve any Parliament. In the exercise of these functions he is in general guided by the advice of the Executive Council. In special circumstances, however, he may act on his own initiative, and, in regard to dissolutions, it has happened more than once that the Governor has opposed the wishes of his Ministers.

THE EXECUTIVE COUNCIL.

The Executive Council as constituted at present consists of eleven members, including the Governor as President. The Vice-President of the Executive is the representative of the Government in the Legislative Council. In addition, there are the seven salaried Ministers, and two other members without portfolio. These form the Cabinet, and are necessarily responsible to Parliament. The office of Executive Councillor is honorary, and each member is supposed to resign on a change of Ministry.

The Constitution Act draws no hard-and-fast line of distinction between the relative powers and privileges of the two Houses of Parliament, but no inconvenience has been felt on this score, since it is tacitly agreed that the procedure in each House shall, so far as is possible, be modelled on that of its prototype in the Imperial Parliament.

THE LEGISLATIVE COUNCIL.

No limit is set by the Constitution Act with regard to the maximum number of members of the Legislative Council, although the minimum is fixed at twenty-one. As the Governor has the power of nominating Councillors, it would at first sight appear as if the privilege might at times prove a serious hindrance to legislation. There is, however, little fear of "swamping," the single occasion on which it was attempted arousing such strong public opinion that a repetition of the practice is hardly likely. The number of Councillors at the latest available date was fifty-six. The qualification for membership consists in being an adult natural-born subject of the King, or a person naturalised under an Act of the Legislature of the State. All persons under 21 years of age, persons not natural-born or naturalised subjects, those in allegiance to a foreign power, Government contractors, or persons interested in Government contracts except as members of a company exceeding twenty in number, and members of either House of the Federal Parliament are disqualified. Members are not reimbursed for their services, but they are granted a free railway pass, and, subject to certain conditions as to conduct, &c., hold their seats for life.

THE LEGISLATIVE ASSEMBLY.

At the present time the Legislative Assembly is composed of ninety members elected for the ninety electoral districts. The qualification for membership consists in being an adult natural-born or naturalised British subject, and the holder of an elector's right. Members of the Legislative Council, persons holding non-political offices of profit under the Crown, those holding pensions during pleasure or for a term, persons under electoral disqualification, insane, or members of the Federal Legislature are disqualified. The tenure of seat is for the duration of the Parliament to which the member is elected. Reimbursement for services is granted at the rate of £300 per annum to members not in receipt of official salary, while each member receives also a free railway pass. The electoral qualification is as follows:—All male or female adults who are natural-born or naturalised British subjects and not debarred under any of the terms of the Electoral Act may become enrolled in the electoral division in which they reside, and vote therein, provided they can produce an elector's right. In order to obtain an elector's right, a person must have had his principal place of residence in the State continuously for one year, or, if naturalised, for one year after naturalisation, and have resided in the electoral district for which he seeks a right for a continuous period of three months prior to the date of application. The last issue of elector's rights was made in 1901, and these remain in force until duly cancelled. General lists of electors are prepared once a year, while provisional lists are prepared and revised each month. After being certified by the Revision Courts the names on the provisional lists are entered on an additional roll.

The Parliamentary Elections Act of 1906, which was reserved on the 19th December, 1906, provides for the abolition of elector's rights.

Since the inauguration of responsible government there have been nineteen complete Parliaments: the date at which each opened and closed will be found in the table below. The Act constituting triennial Parliaments was passed in 1874; previously the limit of duration was fixed at five years.

Parliament.	Opened.		Dissolved.		Duration.			No. of Sessions.
					yr.	mth.	dy.	
First	22 May,	1856	19 Dec.,	1857	1	6	27	2
Second	23 March,	1858	11 April,	1859	1	0	19	2
Third	30 Aug.,	1859	10 Nov.,	1860	1	2	11	2
Fourth	10 Jan.,	1861	10 Nov.,	1864	3	10	0	5
Fifth	24 Jan.,	1865	15 Nov.,	1869	4	9	22	6
Sixth	27 Jan.,	1870	3 Feb.,	1872	2	0	7	3
Seventh	30 April,	1872	28 Nov.,	1874	2	6	29	4
Eighth	27 Jan.,	1875	12 Oct.,	1877	2	8	15	3
Ninth	27 Nov.,	1877	9 Nov.,	1880	2	11	13	3
Tenth	15 Dec.,	1880	23 Nov.,	1882	1	11	8	3
Eleventh	3 Jan.,	1883	7 Oct.,	1885	2	9	4	6
Twelfth	17 Nov.,	1885	26 Jan.,	1887	1	2	9	2
Thirteenth	8 March,	1887	19 Jan.,	1889	1	10	11	3
Fourteenth	27 Feb.,	1889	6 June,	1891	2	3	10	4
Fifteenth	14 July,	1891	25 June,	1894	2	11	12	4
Sixteenth	7 Aug.,	1894	5 July,	1895	0	10	29	1
Seventeenth	13 Aug.,	1895	8 July,	1898	2	10	26	4
Eighteenth	16 Aug.,	1898	11 June,	1901	2	9	26	5
Nineteenth	23 July,	1901	16 July,	1904	2	11	23	4
Twentieth	23 Aug.,	1904	......		......			......
	Average				2	4	19	3 to 4

The next table gives details of the voting at the five elections since the principle of one man one vote became law.

Parliament.	Voters on Roll.	Number of Electors to a Member.	Total Members returned.	Members unopposed.	Contested Electorates.				
					Electors on Roll.	Votes recorded.	Percentage of Votes recorded.	Informal Votes.	Percentage of Informal Votes.
Sixteenth	298,817	2,390	125	1	254,105	204,246	80·38	3,310	1·62
Seventeenth	267,458	2,139	125	8	238,233	153,034	64·24	1,354	0·88
Eighteenth	324,339	2,595	125	3	294,481	178,717	60·69	1,638	0·92
Nineteenth	346,184	2,769	125	13	270,861	195,359	72·13	1,534	0·79
Twentieth	689,490	7,661	90	2	566,829	400,595	70·67	3,973	0·59

As the table shows, the largest percentage of votes was recorded at the first election, when no less than 80·4 per cent of the electors in contested districts exercised the privilege of the franchise. The only near approach to these figures was shown at the election for the nineteenth Parliament, when over 72 per cent. of qualified electors voted. In the other years the proportions were very small, the figures for the 1904 election showing that only 70·7 per cent. of the electors took the trouble to record their votes. This was the first State election at which women voted, and it appears that while 74 per cent. of qualified male voters recorded their votes, only 66 per cent. of the females did so. Making every allowance for exceptional circumstances, these figures give evidence of the existence of a section of the people which has yet to realise its duties in connection with the franchise.

The various Ministries which have held office since the establishment of Responsible Government, together with the duration in office of each, are shown below:—

No.	Ministry.	From	To	Duration.	
				months.	days.
1	Donaldson	6 June, 1856	25 Aug., 1856	2	19
2	Cowper	26 Aug., 1856	2 Oct., 1856	1	6
3	Parker	3 Oct., 1856	7 Sept., 1857	11	5
4	Cowper	7 Sept., 1857	26 Oct., 1859	25	20
5	Forster	27 Oct., 1859	8 Mar., 1860	4	11
6	Robertson	9 Mar., 1860	9 Jan., 1861	10	0
7	Cowper	10 Jan., 1861	15 Oct., 1863	33	7
8	Martin	16 Oct., 1863	2 Feb., 1865	15	18
9	Cowper	3 Feb., 1865	21 Jan., 1866	11	19
10	Martin	22 Jan., 1866	26 Oct., 1868	33	6
11	Robertson	27 Oct., 1868	12 Jan., 1870	14	16
12	Cowper	13 Jan., 1870	15 Dec., 1870	11	3
13	Martin	16 Dec., 1870	13 May, 1872	16	28
14	Parkes	14 May, 1872	8 Feb., 1875	32	26
15	Robertson	9 Feb., 1875	21 Mar., 1877	25	13
16	Parkes	22 Mar., 1877	16 Aug., 1877	4	24
17	Robertson	17 Aug., 1877	17 Dec., 1877	4	0
18	Farnell	18 Dec., 1877	20 Dec., 1878	12	3
19	Parkes	21 Dec., 1878	4 Jan., 1883	48	16
20	Stuart	5 Jan., 1883	6 Oct., 1885	33	2
21	Dibbs	7 Oct., 1885	21 Dec., 1885	2	14
22	Robertson	22 Dec., 1885	25 Feb., 1886	2	3
23	Jennings	26 Feb., 1886	19 Jan., 1887	10	24
24	Parkes	20 Jan., 1887	16 Jan., 1889	23	27
25	Dibbs	17 Jan., 1889	7 Mar., 1889	1	20
26	Parkes	8 Mar., 1889	22 Oct., 1891	31	16
27	Dibbs	23 Oct., 1891	2 Aug., 1894	33	11
28	Reid	3 Aug., 1894	13 Sept., 1899	61	10
29	Lyne	14 Sept., 1899	27 Mar., 1901	18	12
30	See	28 Mar., 1901	14 June, 1904	38	17
31	Waddell	15 June, 1904	29 Aug., 1904	2	14
32	Carruthers	30 Aug., 1904	Still in office.	....	

The Carruthers Ministry, which is at present in office, is composed of the following members:—

Premier and Colonial Treasurer	Hon. J. H. CARRUTHERS.
Chief Secretary	Hon. T. WADDELL.
Secretary for Lands	Hon. J. ASHTON.
Secretary for Public Works	Hon. C. A. LEE.
Secretary for Mines and Agriculture	Hon. S. W. MOORE.
Attorney-General and Minister of Justice	Hon. C. G. WADE.
Minister of Public Instruction and Minister for Labour and Industry	Hon. J. A. HOGUE.
Minister without portfolio	Hon. W. T. DICK.
Minister without portfolio	Hon. J. N. BRUNKER, M.L.C.
Vice-President of Executive Council, and Representative of the Government in the Legislative Council	HON. J. HUGHES, M.L.C.

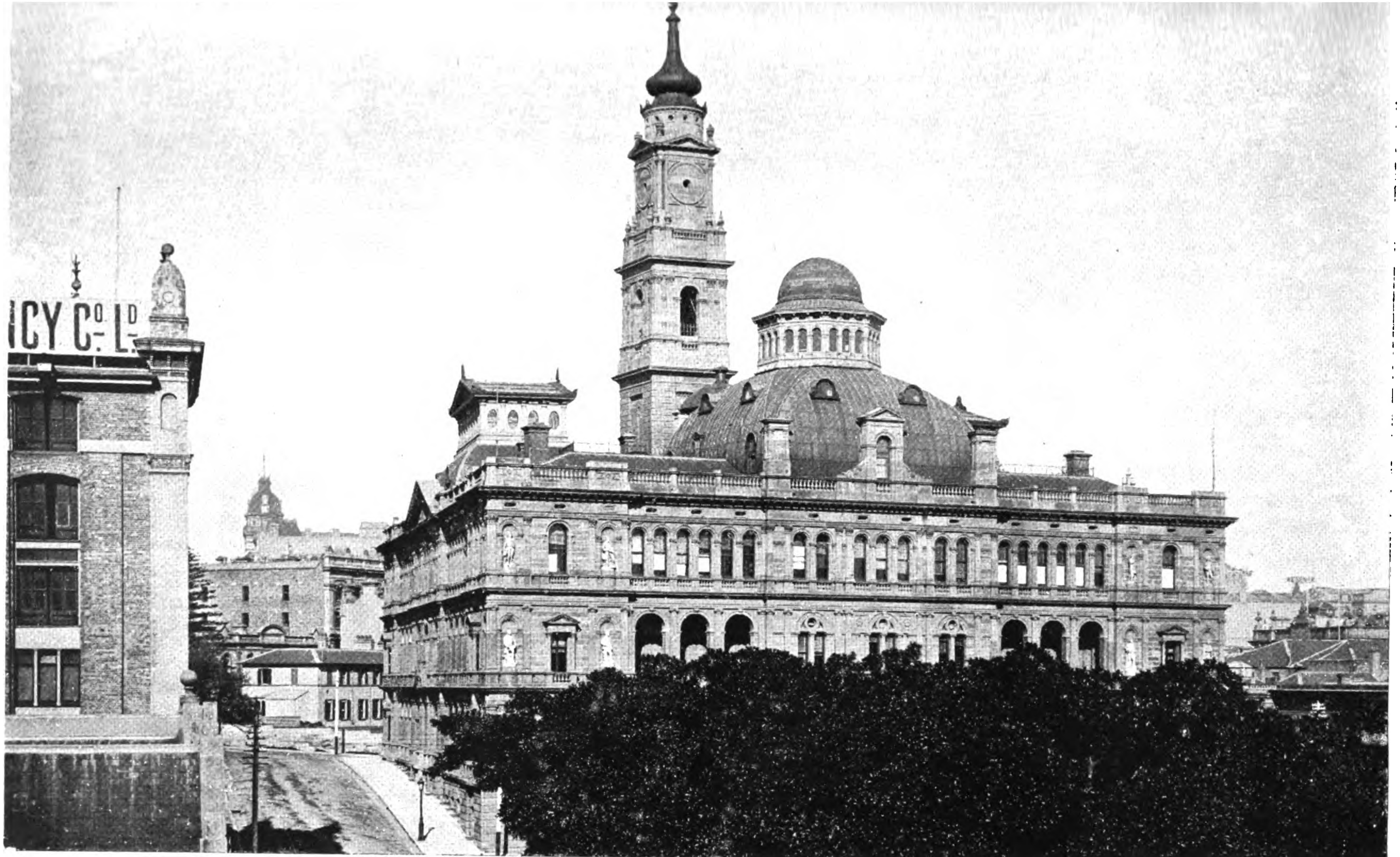
LAND LEGISLATION AND ADMINISTRATION.

Since the foundation of the Colony in 1788 various systems have from time to time been devised, with the object of promoting settlement on the public estate. Originally the Governor possessed the power of granting land, and this power was exercised under prescribed conditions, such as the payment of an annual quit-rent, cultivation of a portion of the area granted, and other services periodically specified, under instructions received from the Secretary of State. The first instructions issued to Governor Phillip, on the 25th April, 1787, authorised him to make grants only to emancipated prisoners, in the following terms:—"To every male shall be granted 30 acres of land, and in case he shall be married, 20 acres more; and for every child who may be with them at the time of making the said grant, a further quantity of 10 acres, free of all fees, taxes, quit-rents, and other acknowledgments for the space of ten years." The annual quit-rent to be paid on these grants was afterwards fixed at 6d. for 30 acres. The first settler was a prisoner of the name of James Ruse, who, having completed his sentence, entered on his farm of 30 acres at Parramatta on the 25th February, 1789.

Additional instructions were issued by the Secretary of State on the 20th August, 1789, extending the privilege of obtaining grants to such of the non-commissioned officers and men of the detachment of marines serving in New South Wales as were desirous of remaining in the territory after obtaining their discharge. The Governor was further requested to facilitate the settlement of free persons who might be disposed to emigrate with the view of becoming settlers in New South Wales, by giving them grants of land not exceeding the maximum area granted to non-commissioned officers, viz., 100 acres, subject to the same quit-rent, the annual amount of which was 1s. for every 50 acres, payable at the expiration of five years after the issue of a grant. In the original instructions no mention was made of grants to officers, but this omission was afterwards rectified. These early grants were made on condition that a certain proportion of the land should be cultivated, and although this condition was not always complied with, no grants were ever cancelled in consequence. As to the payment of quit-rents, Mr. Commissioner Bigge, in his report on the administration of Governor Macquarie, states that from 1809 to to 1823 no quit-rents were collected.

With regard to settlement in the town of Sydney, grants were not made until the year 1811, when the necessary authority to do so was given in a letter from the Secretary of State, dated the 26th July, and allotments were granted on lease only for periods of fourteen or twenty-one years. Previous to the building regulations issued by Governor Macquarie on the 18th August, 1810, no attention was paid to the regular admeasurement of town allotments or to the formation of streets.

Quit-rents on leases and grants of town allotments varied in amount according to the Governor at whose discretion they were imposed. Leases of fourteen and twenty-one years were subject to annual quit-rents of 2s. 6d., 5s., 10s., and 20s. each; and from 1811 to 1814 grants of town



LANDS DEPARTMENT, BRIDGE-STREET SYDNEY.

allotments were charged at the rate of 2s. 6d. per rod per annum; but on the 21st March, 1814, the following scale of quit-rents for town allotments was established by Governor Macquarie:—

Gradation.	Leases.		Grants.	
	Sydney.	Other Towns.	Sydney.	Other Towns.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Maximum	2 0 0	1 0 0	3 0 0	2 0 0
Minimum	0 10 0	0 10 0	1 0 0	0 3 4
Above 20 rods, per additional rod, but not exceeding the maximum	0 0 2	0 0 1	0 0 4	0 0 3

The method of disposing of Crown lands, and the scale of quit-rents chargeable, suffered no alteration until the issue of the Government and General Order of the 5th November, 1823. By this order the terms upon which lands could be obtained in New South Wales were modified, the annual quit-rent being raised to 3s. for every 20 acres, payable immediately if the lands had been obtained as an additional grant, but if otherwise at the commencement of the sixth year.

Though a certain limit appears to have been fixed as to the area of grants, the early Governors often overstepped their instructions in this direction. Governor Macquarie, in particular, was deemed to have disposed of the Crown lands in too liberal a fashion, and the result of an investigation into his administration led the British Government to issue to his successors instructions of a more definite and stringent character with regard to the alienation of Crown lands.

The instructions to Sir Thomas Brisbane introduced the principle of alienation of lands by sale to free settlers who arrived in the State with a certain amount of available capital, and the grants were made on condition that a certain proportion of the land should be cultivated, or improvements of corresponding value erected thereon, and a given number of convicts maintained free of expense to the Government. On the 8th November, 1824, it was further proclaimed that a grant of 100 acres would be given to any settler for every convict maintained by him free of expense to the Government; but applications for grants under this condition became so frequent that the order was rescinded on the 16th March, 1826. By a Government and General Order, dated the 24th March, 1825, land was allowed to be sold by private tender at a minimum price of 5s. per acre. The order notified that the Governor would receive applications for the sale of waste lands; but no person was permitted to purchase more than 4,000 acres, nor any family more than 5,000 acres. The price of unlocated Crown lands in the county of Cumberland, or of any of the lands situated on the west of the Nepean River, was raised to a rate ranging from 7s. 6d. to 10s. per acre. The disposal of lands by sale did not, however, interfere with the ordinary method of alienating town allotments and country lands by grants subject to the payment of quit-rents.

The progress of settlement and the extension of the pastoral industry (which was already taking place) rendered it necessary that some classification of lands should be made in accordance with natural adaptability to the various purposes of colonisation. On the 18th May, 1825, instructions were received from the Home Secretary directing that the State should be divided into counties, hundreds, and parishes, and that a valuation should be made of the lands throughout the territory, with a view of fixing an average price at which all the disposable lands should be put up for sale. The grants made thereafter, within the limits in which settlement was allowed, were subject to the payment of a quit-rent of 15s. for every 100 acres, redeemable at twenty years' purchase. Three Land Commissioners (of whom Sir Thomas Mitchell, the Surveyor-General, was President) were appointed on the 10th January, 1826, to give effect to these instructions. The Commissioners completed their labours in about three years, and divided the territory into nineteen counties, covering some 34,505 square miles, or 22,083,200 acres of land. During this period certain modifications were introduced; the sale of land was suspended, and the quit-rents charged on grants were altered to a rate of 5 per cent. per annum on the value fixed by the Commissioners, whilst on grants in extension of previous grants, and on lands reserved to settlers for their choice of purchase, a charge was made at the rate of 20s. per 100 acres. On the 28th August, 1828, the quit-rent on primary grants was altered to an annual sum of 2d. per acre, and this rate remained in force until grants were abolished except for public purposes, and the principle of sale by public auction, in lieu of private tender, was made the sole means of alienating Crown lands. The Land Commission was abolished on the 6th May, 1830.

Great difficulty has been experienced in determining the area granted and sold by private tender from the date of the first settlement to the year 1831, when the system of land alienation by auction sale was introduced; but it has been ascertained from authentic sources that the following areas were disposed of as under:—

	acres.
Area granted by Governors up to 1810	177,500
Do Governor Macquarie, 1810–23	400,000
Area granted and sold, 1824–31	3,386,250
Total	3,963,750

From this total, however, there should be deducted 57,423 acres of land granted in Tasmania (then known as Van Diemen's Land), reducing to 3,906,327 acres the area granted and sold within the present limits of New South Wales.

The system of granting land upon the payment of an annual quit-rent was at all times subject to many difficulties, and the collection of these dues appears to have been carried out in a very perfunctory manner. These difficulties led the Government in later years to offer special inducements for the redemption of quit-rents. On the 9th October, 1846, the following notice was proclaimed:—"All lands for which twenty years' quit-rent has been paid shall be free from further charge, and any persons who have paid more than twenty years' quit-rent shall have the difference refunded to them." On the 30th July, 1849, it was further notified that at any time thenceforward any person might redeem his future quit-rent by an equivalent cash payment. Finally, a Government notice of the 13th May, 1851, directed that all quit-rents of a higher annual rental than 2s. for every 100 acres would be reduced to that uniform rate at the expiration of the year 1851; and also that the quit-rents on allotments in country towns would be reduced to one-fourth of the rate fixed in the deeds of grant, with the power of redemption at twenty years' purchase.

With regard to allotments in Sydney and other large towns, which were either granted or leased under the regulations established by Governor Macquarie, the rates levied by him in 1814 were first altered by Sir Thomas Brisbane as follow:—

On leases for twenty-one years	6d. per rod.
On town grants	9d. ,,

A Government order, dated the 29th March, 1829, established the following regulations:—"Upon the approval of applications for town allotments a grant of the *fee simple* will be given, it being the intention of the Government not to issue leases in the future. The rates of annual quit-rents in the several classes of towns shall be as follow:—

1. Sydney	6d. per sq. perch.
2. Seaport towns	5d. ,,
3. Towns at the head of navigable rivers	4d. ,,
4. Inland towns	2d. ,,

The said quit-rents shall be unredeemable for ever, but they shall not commence until seven years after the date of authority to take possession, except in the towns of Parramatta and Windsor." Leases were, however, re-established by a Government notice of the 25th August, 1834, by which allotments were allowed to be leased in the country towns only, with covenant to convert the same into grants, either upon payment of twenty-one years' quit-rent or upon the erection of buildings to the value of £1,000.

INTRODUCTION OF LAND SALES.

The alienation of land to settlers by grant was abolished by Viscount Goderich, Secretary of State for the Colonies. Under the Government and General Order, dated the 14th February, 1831, it was notified that no Crown lands were to be disposed of otherwise than by public competition, the minimum price being fixed at 5s. per acre. Settlers were allowed to select within the settled districts only, and the land thus selected was submitted to auction and sold to the highest bidder, the selector being generally the purchaser. In 1839 the upset price was raised to 12s. per acre, and the practice was introduced of varying this minimum according to the presumed value of the land, making it, as a general rule, from 10 to 20 per cent. less than the price of the last land sold of the same quality, and in the same locality. In the Port Phillip district land was only brought to sale at the discretion of the Governor.

Until the year 1841, regulations for the sale of land were issued by the Secretary for State; but on the 21st August of that year additional instructions were forwarded to Sir George Gipps, stating that in future it should be competent for the Governor, with the advice of the Executive Council, to revoke the order in force, and to substitute regulations passed by the Colonial Government with regard to the disposal of public lands.

Although grants had been virtually abolished in 1831, a certain quantity of land was still being conveyed to settlers in virtue of promises made by former Governors. The following figures show the area of land granted and sold during the period 1832-1840:—

Year.	Area granted.	Area sold.	Year.	Area granted.	Area sold.
	acres.	acres.		acres.	acres.
1832	15,843	20,860	1837	6,090	370,288
1833	14,639	29,001	1838	63,160	277,466
1834	27,861	91,400	1839	16,832	234,272
1835	5,271	271,947	1840	5,243	105,900
1836	16,132	389,546			

In addition to the above, there were sold in the district of Port Phillip, or the Southern District, in—

1837	88 acres.
1838	38,694 „
1839	38,347 „
1840	83,888 „

A new division of the territory had been made under the Land Regulations issued by the Governor and Executive Council on the 21st June, 1841, the Northern District including the country around Moreton Bay; the Middle District, the nineteen settled counties; and the Southern District, the Port Phillip settlement and Gippsland. In the Middle and Northern Districts the upset price was maintained at 12s. per acre, but it was raised to 20s. per acre in the Port Phillip District. These Regulations were again superseded by an Act of the Imperial Parliament, entitled "An Act for regulating the sale of waste lands belonging to the Crown in the Australian colonies," which came into force on the 22nd June, 1842. Under this Act the principle of sale at auction was maintained, but the lands applied were to be surveyed before being put up at quarterly sale, the upset price being fixed at 20s. per acre, payable forthwith. Blocks of unsurveyed land, containing 20,000 acres or more, could, however, be sold in one lot by private contract at not less than the minimum price.

Under the Imperial Act of the 9th March, 1847, amending the above, a new classification of lands took place, and the territory was again divided into—first, settled districts, including the nineteen counties, and the lands in the counties of Stanley and Port Phillip immediately surrounding the settlements at Moreton Bay and Melbourne, respectively; second, intermediate districts, comprising a belt of land from 50 to 200 miles inland beyond the boundaries of the settled districts, and in which pastoral occupation had already spread; and, third, unsettled districts, extending westward to the extreme limits of the State. This amending Act did not affect the disposal of Crown lands by public auction or private contract; but it introduced a system of leasing the lands for pastoral purposes, for various terms, in each of the three divisions. During the currency of a lease the land was saleable only to the lessee, and after the expiration of the term the lessee was also allowed a pre-emptive right over all or any part of the land at the upset price of £1 per acre. The legislation of 1847 remained in force in New South Wales, as regards the disposal of public lands by auction sale at £1 per acre, until the year 1861; and in the States of Victoria and Queensland, which were separated from the mother State, in 1851 and 1859, respectively, until repealed by Acts of the local Parliaments. The following table shows the area of land sold and granted in New South Wales from the year 1841 to 1861 inclusive, under the regulations described:—

Year.	Area granted.	Area sold.	Year.	Area granted.	Area sold.
	acres.	acres.		acres.	acres.
1841	18	31,275	1852	57	25,812
1842	15	5,713	1853	612	65,870
1843	7	4,037	1854	2,085	78,221
1844	28	3,701	1855	297	122,667
1845	34	3,763	1856	227	163,952
1846	64	3,036	1857	85	137,867
1847	834	2,602	1858	444	123,548
1848	112	3,232	1859	518	155,171
1849	861	7,341	1860	193	169,217
1850	548	12,191	1861	459	189,937
1851	103	21,747			

From 1841 to 1851 there were also granted and sold in the Port Phillip District the following areas:—

Year.	Area granted.	Area sold.	Year.	Area granted.	Area sold.
	acres.	acres.		acres.	acres.
1841	......	61,197	1846	6	4,578
1842	4	27	1847	17	26,073
1843	3	831	1848	2	18,007
1844	......	181	1849	46	28,091
1845	......	3,685	1850	108	40,043

In the District of Moreton Bay the following areas were sold and granted from its first settlement in 1842 to its separation in 1859:—

Year.	Area granted.	Area sold.	Year.	Area granted.	Area sold.
	acres.	acres.		acres.	acres.
1842	2	11	1851	5	2,282
1843	16	360	1852	105	739
1844	5	378	1853	70	7,805
1845	1	299	1854	......	5,175
1846	......	70	1855	......	5,285
1847	......	51	1856	195	3,802
1848	2	240	1857	8	7,235
1849	8	825	1858	9	14,063
1850	4	249	1859	......	11,620

Thus, from the foundation of the Colony to the inauguration of the legislation of 1861, public lands, both in the mother Colony and in the territories administered from Sydney, had been disposed of as follows:—

Period.	In New South Wales proper.	In Van Diemen's Land.	In Port Phillip District.	In Moreton Bay District.
	acres.	acres.	acres.	acres.
From 1787 to 1823	520,077	57,423	....	......
From 1824 to 1836	4,268,750	....	....	......
From the first settlement in Port Phillip in 1837 to 1841	1,110,544	....	222,214	......
From the first settlement in Moreton Bay in 1842 to the separation of Port Phillip in 1851	48,119	....	121,702	2,521
From 1851 to the separation of Moreton Bay in 1859	899,283	....	....	58,398
During 1860–61	299,806	....	....	......
Total from 1787 to 1861 inclusive...	7,146,579	57,423	343,916	60,919

As regards the area granted and sold in New South Wales proper under the various systems described in the preceding pages, the 7,146,579 acres disposed of from the first day of the occupation of the territory to the end of the year 1861 were alienated as follow:—

	acres.
1. By grants and sales by private tender to close of 1831	3,906,327
2. ,, ,, in virtue of promises of early Governors made prior to 1831, from 1832–40 inclusive	171,071
3. ,, sales at auction, at 5s., 7s. 6d., and 10s. per acre, from 1832-38 inclusive	1,450,508
4. ,, ,, ,, ,, 12s. and over per acre, at Governor's discretion, from 1839–41 inclusive	371,447
5. ,, ,, ,, ,, 20s. per acre, from 1842-46 inclusive	20,250
6. ,, ,, ,, and by purchases in virtue of pre-emptive rights, from 1847–61 inclusive	1,219,375
7. ,, grants for public purposes, and for grants in virtue of promise of Governor made prior to the year 1831, and grants in exchange for lands resumed from 1841–61 inclusive	7,601
Total alienated on 31st December, 1861	7,146,579

In dealing with the constitution of rural property in the State it is necessary to mention that, in addition to the modes of alienation of the public lands already described, certain grants were made under special enactments. Instructions issued to Sir Thomas Brisbane directed the Governor to reserve one-seventh of the Crown lands in each county for the purpose of Church and School establishments, but these instructions do not seem to have been fully carried out, as the reservations did not amount to anything like the proportional area specified. These reserves were as follow:—County of Bathurst, 136,157 acres; Camden, 11,428 acres; Cumberland, 28,081 acres; Cook, 100 acres; Durham, 29,453 acres; Gloucester, 176,091 acres; Hunter, 2,314 acres; Northumberland, 15,362 acres; Roxburgh, 1,000 acres; and St. Vincent, 43,500 acres; making a total area of 443,486 acres, which subsequent surveys and computation of the area within the limits of the reservations show to be actually 454,050 acres. These lands were administered by the Clergy and School Lands Corporation until the abolition of that body by Order of Council of the 4th February, 1833, whereupon all lands vested in the same reverted to the Crown, and an agent was appointed to determine the claims of purchasers, to whom deeds of grant were made, the said lands being secured to them by a subsequent Act of Council dated the 5th August, 1834. Of the area mentioned above, 171,746 acres were alienated up to the year 1880, when, by the Church and School Lands Dedication Act of that year, the balance of 282,304 acres came under the control of the State legislature to be administered for the purposes of Public Instruction. The unsold Church and School Lands thus transferred are situated as follow:—In the County of Gloucester, 172,297 acres; Bathurst, 83,649 acres; St. Vincent, 18,229 acres; Cumberland, 3,973 acres; Durham, 3,361 acres; Northumberland, 744 acres; Hunter, 48 acres; and Camden, 3 acres. The Church and School Lands Act of 1897, however, vested these lands in the Crown, free from all trusts and provisions affecting the same, but subject to the provisions of the Crown Lands Act of 1884 and any Acts amending the same, thus determining the land as Crown land. Until the areas are classified in accordance with the provisions of the Crown Lands Act of 1895, they can only be dealt with by reservation, dedication, license, or held under special or annual lease.

The Australian Agricultural Company was incorporated by an Act of the Imperial Parliament, dated the 21st June, 1824, and a promise of a grant of 1,000,000 acres made to this Company was fulfilled in the following year. Originally a grant containing 1,048,960 acres was selected in the country surrounding Port Stephens, but in 1832 the Company was authorised to exchange a portion of this grant, containing 600,000 acres, for two allotments situated on the Peel River and on the Liverpool Plains. These three grants contain, according to the latest surveys, the following areas:—

	acres.
Port Stephens Estate, County of Gloucester	464,640
Peel River Estate, County of Parry	249,600
Warrah Estate, County of Buckland	313,298
Total	1,027,538

In addition to this large area of land, the Company also obtained from the Crown the promise of a lease of the coal-fields at Port Hunter (Newcastle) for thirty-one years. This was, however, afterwards exchanged for a grant of 500 acres, an area which was increased in 1828 to 2,000 acres of coal land, upon which the Company's collieries are now situated.

OCCUPATION OF PASTORAL LANDS.

The pastoral lands of New South Wales have been occupied under various systems. Land was held for grazing in the early days by virtue of tickets of occupation, which ceased to be issued on the 1st May, 1827, after which date persons holding such lands were required to pay a quit-rent of 20s. per 100 acres per annum, and to vacate the land at six months' notice. The requirements of the settlers for depasturing their increasing stock induced them to occupy Crown lands without any right except that of first discovery, and as they extended their operations inland the Legislature found itself compelled, on the 28th August, 1833, to pass an Act protecting Crown lands from intrusion and trespass, and commissioners were appointed for the purpose of safeguarding the interests of the State.

The discovery of new country soon had the effect of taking many of the pioneer squatters beyond the limits of settlement as proclaimed on the 14th October, 1829, and without authority or license large tracts of unlocated Crown lands were occupied. Fresh regulations, in which severe penalties were enacted, were issued on the 29th July, 1836, with the view of restraining this unauthorised occupation of the waste lands of the State. These regulations being in many cases disregarded, an Act was passed on the 22nd March, 1839, to further restrain this unauthorised occupation; and to provide the means for defraying the expense of police and commissioners appointed by the Government to protect its estate in the border districts, a yearly assessment was levied upon stock at the following rates:—½d. for every sheep; 1½d. per head of cattle; and 3d. for every horse.

The Imperial Act of the 9th March, 1847, which rendered it lawful for the Sovereign, by any Order in Council, to make and establish such regulations as should seem meet for the sale and occupation of the waste lands, was immediately followed by an order introducing an entirely different system in legislation for the pastoral occupation of lands in New South Wales. Hitherto the tenure had been a yearly one, and the fee was paid on the extent of land occupied by the squatter. For this system was substituted fixity of tenure of lease, and the license fee was calculated upon the stock-carrying capacity of the run. Under the regulations issued in 1847, the term of the pastoral leases in the unsettled districts was fixed at fourteen years; in the intermediate division this term was reduced to eight years; and in the settled districts the yearly tenure was retained. The licensing fee was charged at the rate of £10 for 4,000 sheep, or a proportional number of cattle—which was the minimum at which the stock-carrying capabilities of a run could be assessed—and £2 10s. for every additional 1,000 sheep, or proportionate number of cattle, which the run was estimated to carry. In the settled districts lands were let for pastoral purposes only, in sections of not less than 1 square mile in area, the annual rental for each section being fixed at 10s. The holders of alienated lands were permitted to depasture their stock upon Crown lands adjoining their holdings free of charge, this permission, however, constituting only a commonage right. The Occupation Act of 1861, which abolished the Orders in Council, inaugurated a new system, limiting the tenure of pastoral leases to five years in the unsettled and intermediate or second-class settled districts, and leaving the whole of the pastoral leases open to the operations of the free selectors. The evils resulting from this system led Parliament to adopt in 1884, 1889, 1895, and finally in 1905 the measures at present in force, the provisions of which are described further on.

ROBERTSON'S LANDS ACT.

The conditions of colonisation greatly altered under the powerful attraction of the gold-fields, and after the first excitement of the rush for gold had died out, the question of land settlement had to be dealt with in an entirely new spirit, to meet the wants of a class of immigrants of a different type from those contemplated by former enactments, the result being the passing of the Crown Lands Act of 1861, under the leadership of Sir John Robertson. Before this Act became law, the conditions of settlement rendered it difficult for men of small means to establish themselves with a fair chance of success. The new measures aimed at facilitating the settlement of an industrial agricultural population side by side with the pastoral tenants, and with this in view, the Act introduced a principle entirely new to the land legislation of the State, namely, that of free selection, in limited areas, *before survey*. To this privilege was attached the condition of *bona fide* residence, and the land was to be sold at a fixed price, carrying interest on the balance outstanding, after deducting the amount of the deposit, at the rate of 5 per cent. per annum. This provision, however, was modified by the Amending Act of 1875, under which annual instalments were payable, and the option was given to any conditional purchaser of lands taken up prior to this amendment to avail himself of the change in the method of payment. The system of unconditional sales was, however, continued under the Act of 1861; and during the twenty-three years in which this Act was in operation there were sold 23,470,140 acres conditionally, and 15,572,001 acres by auction, improvement purchase, in virtue of pre-emptive right, or otherwise without conditions, the total area alienated being 39,042,141 acres. In a very large number of cases the land selected or purchased reverted to the State, so that the absolute area sold or in process of sale when the Act of 1884 came into force amounted to only 32,819,023 acres, besides 7,146,579 acres alienated prior to 1861.

THE CROWN LANDS ACTS OF 1884 AND 1889.

The Act of 1861 was, after many amendments, superseded by that of 1884, with the supplementary enactment of 1889. Though differing widely from the former Act in many important particulars, these measures maintained the principle of free selection before survey, but with one essential difference. Under the original Act the whole area of the Crown lands of the State was thrown open to free selection, and the lands held under pastoral lease were not exempted from the operation of this law. While maintaining the principle of selection before survey, the aims of the Acts of 1884 and 1889 were to give fixity of tenure to the pastoral lessees and to obtain a larger rental from the public lands, at the same time restricting the area sold unconditionally. For this last purpose the holder of a pastoral lease under the old Act was required to surrender one-half of his lease, which was resumed by the Crown for subsequent alienation, leasehold, or reserve; the other half remaining in the leasehold occupation of the pastoralist under fixity of tenure for a term of years. It was computed on the 31st December, 1884, when this division was made, that there were within the State 4,313 leased runs, yielding an annual rental, in round figures, of £268,500, and forming about 1,600 "stations," estimated to contain the bulk of the unalienated public estate, after allowing for reserves, &c. That the increase in the revenue from pastoral occupation, which was one of the principal objects of the alterations introduced in the land legislation by the Act of 1884, has been realised, may be gathered from the fact that during the financial year 1905-6 the total rental received from the occupation of Crown lands amounted to £532,594. The Act of 1884 became law on the 1st January, 1885, and that of 1889 came into operation on the 1st December of that year.

THE CROWN LANDS ACTS OF 1895 AND 1903.

Whatever may have been the merits of the Act of 1861, it conspicuously failed to encourage *bona fide* settlement; nor can it be said that the legislation of 1884 and 1889 succeeded where the original Act had failed, as the accumulation of land in large estates continued, while settlement, properly so called, proceeded very slowly. Expert opinion strongly pointed to the necessity of introducing entirely new principles into the agrarian legislation of the State, and this has been done in the Crown Lands Acts of 1895 and 1903, which not merely remedy the defects of previous legislation, but, while placing land within easy reach of all, appear to supply, by the introduction of new systems of tenure, viz., homestead selections and settlement leases, something that was needed to transform the land speculators into settlers properly so called.

The Crown Lands (Administration) Bill introduced during 1906 provided for the appointment of three Commissioners to exercise and perform certain powers and duties which are now vested in the Secretary and Under Secretary for Lands. The Commission were to administer the Crown Lands Acts and such other Acts—with the exception of the Western Lands Act—the administration of which, by statute or otherwise, might be vested in the Minister. While the sole control of the Department and its officers was to be placed in the hands of the Commission, it was provided that on matters of policy they should make recommendations to the Minister and give effect to his decisions thereon.

Matters of policy were defined as follows:—Withdrawal of Crown lands from lease; reservations or dedications and revocations thereof; acquisition of land under Closer Settlement Acts; sale or lease of Crown lands, excepting by annual lease or under Closer Settlement Acts, or residential conditions; forfeitures under Crown Lands Acts; extension of time of payment by instalments, &c.

The Commissioners were also from time to time to report to the Minister concerning lands available or likely to be available for settlement, and also with regard to the demand for land for *bonâ fide* settlers. They were to report as to the suitableness for the purposes of agricultural settlement, mixed farming, or closer pastoral settlement, of lands held under improvement leases. They were to further specify the reforms considered necessary in Departmental administration, or in the scope and administration of the land laws, and inquire into such other matters as the Minister might deem necessary.

The Bill provided for the registration of land agents, and specified the penalties to be imposed on unregistered persons practising as such. Agents were to pay a registration fee and pass an examination on the Crown Lands Acts, and such other Acts as the Land Appeal Court may deem necessary. The examination might, however, be dispensed with in cases where the land agent had carried on his business continuously during six months prior to the passing of the Bill. Provision was made for a rigid scrutiny of agents' bills of costs. The measure was, however, not proceeded with.

The State is divided into three territorial divisions, viz., the Eastern, the Central, and the Western; the control of the lands within the latter area is vested in a special board consisting of three commissioners. The divisions are subdivided into Land Districts; and a Crown Land Agent, whose duty it is to receive applications for land in accordance with certain regulations, resides in each district. Groups of these districts are joined together under an administrative Board, and form what is called a Local Land Board District. The Land Board consists of a chairman and one or two ordinary members. An appeal to the Land Appeal Court may be made against a decision of the Board. This Court is composed of a President and two Commissioners appointed by the Executive, whose decisions in matters of administration have the force of judgments of the Supreme Court; but whenever questions of law become involved, a case may be submitted to the Supreme Court, either at the written request of the parties interested, or by the Land Appeal Court acting of its own accord. The judgments given on such appeals are, however, subject to final determination by the Privy Council. The conditions of alienation and pastoral occupation of Crown lands differ in each of the three divisions of the State.

The Eastern Division has an area of 61,260,326 acres, and includes a broad belt of land comprised between the sea-coast and a line nearly parallel thereto. This line starts from a point midway between the small settlements of Bonshaw and Bengalla on the Dumaresq River, on the northern frontier, and terminates at Howlong, on the River Murray, and thus embraces the coastal districts of the State, as well as the northern and southern tablelands. In this division lie all the original centres of settlement, and the markets of the State are more readily accessible to it than to the other districts. In it, moreover, is to be found some of the best agricultural land in New South Wales. For these reasons, the conditions for the purchase and occupation of the Crown lands in the Eastern Division are more restricted than is the case in the Central and Western Divisions.

The Central Division of the State embraces an area of 57,055,846 acres, extending from north to south between the western limit of the Eastern Division and a line starting from a point on the Macintyre River, where it is crossed by the 149th meridian of east longitude, and following this river and the Darling to the junction of Mara Creek; thence along that creek to the Bogan River, and across to the River Lachlan, between the townships of Euabalong and Condobolin, along the Lachlan to Balranald, and thence to the junction of the Edward River with the Murray, on the frontier of Victoria. The Central Division thus embraces the upper basin of the Darling River in the northern part of the State, and portions of those of the Lachlan, the Murrumbidgee, and the other affluents of the Murray in the south. The land in this division is mainly devoted to pastoral pursuits; but experience having proved that agriculture can be successfully carried on, the area cultivated has considerably increased. The rainfall, however, being less regular, and the distance from markets greater than in the Eastern

Division, and the land, moreover, being of inferior value, the legislation provides for the selection of larger areas than in the latter district.

The Western Division comprises the whole of the land situated between the western limit of the Central Division and the South Australian border. It embraces an area of 80,318,708 acres, watered by the Darling River and its tributaries. This part of New South Wales is essentially devoted to pastoral pursuits. Water conservation and irrigation may in time counteract climatic conditions and irregular rainfall, and make agriculture possible over this large area, as its soil is adapted to the growth of any kind of crop; but legislation in regard to the occupation of the lands of the district is based upon the assumption that for many years to come there will be little inducement for agricultural settlement.

Under the Acts at present in force, land may be acquired by the following methods:—(1) By conditional and additional conditional purchase with residence; (2) by conditional purchase without residence; (3) by classified conditional purchase; (4) by the preferent right of purchase attached to conditional leases; (5) by improvement purchases on goldfields; (6) by auction sales; (7) by after-auction sales; (8) by special sales without competition; (9) by way of exchange; (10) by virtue of volunteer land orders; and (11) by homestead selection.

Crown lands may also be let under the following systems, viz.:—Annual lease, conditional purchase lease, conditional lease, lease as inferior lands, occupation license, pastoral lease, scrub lease, special lease, residential lease on gold and mineral fields, improvement lease, settlement lease, snow-lands lease, and working men's blocks.

The maximum area which can be conditionally purchased differs in the eastern and central divisions. In the western division land can only be occupied under lease, or alienated by auction.

Conditional Purchases.

Any unreserved Crown lands, not held under pastoral or other lease, in the eastern and central divisions of the State are available for conditional purchase, and the fact that lands are held under annual lease or occupation license does not disqualify them from being acquired in this way. Land under conditional lease in any division may be conditionally purchased, but only by the leaseholder. Lands within suburban boundaries or within population areas may be proclaimed as special areas, and are open to conditional purchase under the special conditions prescribed. The existence of improvements does not constitute a bar to conditional purchase, but the applicant is required to pay for them. Where such improvements are the property of the Crown, their value is determined by the Land Board, which also fixes the period within which they are to be paid for. Where the improvements are not Crown property, the parties make their own arrangements.

Any person of or over the age of 16 years, of either sex, other than a married woman who has not been judicially separated from and is living apart from her husband, may take up a residential conditional purchase; but no one under the age of 21 years can select a non-residential conditional purchase. It is specially enacted that every conditional purchase must be made solely in the interest of the applicant, and any agreement to the contrary is void. Minors who become conditional purchasers have, in connection with their land, the rights and liberties of persons of full age.

The area which may be selected depends on the division in which the land is situated, and whether it is taken up under residential or non-residential conditions, or falls within a special area. The minimum and maximum areas allowed are as follows:—

Class.	Division.	Minimum Area.	Maximum Area.
		acres.	acres.
Residential	Eastern	40	640
,,	Central	40	2,560
Non-residential	Eastern	40	320
,,	Central	40	320
Special area	Eastern	......	320
,,	Central	......	640

Land applied for under conditional purchase is ordinarily available at the statutory price of £1 per acre, but provision is also made for the acquirement of these purchases within special and classified areas.

With regard to special areas, both the minimum and maximum areas are subject to proclamation in the *Government Gazette*, and, are, therefore, liable to limitation according to the circumstances of each case. It is open to any conditional purchaser to take up the maximum area at once, or by a series of purchases at such intervals as may suit his convenience. With the exception of non-residential purchases, provision is made in the Crown Lands Amendment Act of 1903 that the maximum areas specified may be exceeded by allowing an applicant to acquire additional holdings, the area of which, together with all other lands held by the applicant other than under annual tenure, must not exceed such an area as, in the opinion of the Land Board, is sufficient for the maintenance of his home thereon in average seasons and circumstances. The additional holdings need not necessarily adjoin the original holding, but must, in the opinion of the Land Board, be situated within a reasonable working distance thereof. Under the "Crown Lands Act Amendment Act of 1905," areas may be set apart on notification in the *Government Gazette* for original holdings which include (*a*) original conditional purchases and (*b*) original conditional purchases and conditional leases to be taken up in virtue of and at the same time as the original conditional purchase within the area; or additional holdings which include (*a*) additional conditional purchases, (*b*) conditional leases other than those previously mentioned; but no area can be taken up under both classes of holdings. Prices, capital value, and rentals of the areas are to be specified in the notification.

Lands may be classified and set apart, by notification in the *Government Gazette*, at prices either above or below £1 per acre, where such a course is deemed desirable, having regard to the actual value of the land.

An application for a conditional purchase must be accompanied by a declaration containing replies to questions—the object of which is to prove that the applicant is legally competent to apply—and must be lodged with the Crown Lands Agent of the district in which the land is situated, and a deposit and survey fee paid at the same time. The deposit is 2s. per acre on residential purchases, and 4s. per acre on non-residential purchases of ordinary land, while on special areas, and on lands within classified areas, it varies according to the prices fixed for the land. Under ordinary conditions the balance of purchase money, with interest at 4 per cent. per annum, is cleared off by thirty annual payments of 1s. per acre. The first instalment is not due until the expiration of three years from the date on which the land was applied for. In the case, however, of holdings brought under the Conditional Purchasers' Relief Act of 1896, the instalments may be reduced to 9d. per acre, and in some instances to 6d. per acre, thus extending the total period of repayment to sixty-six years, provided the holders of the conditional purchases are and continue in residence. By the Crown Lands Act Amendment Act of 1903, the rate of interest on the balance of purchase money has been reduced to 2½ per cent. per annum for any conditional purchase applied for after the passing of that Act, and it is also provided that the same rate of interest may, in certain cases, be payable in respect of conditional purchases applied for before the passing of that Act.

The original conditional purchase must be resided upon continuously by the selector for a period of ten years, calculated from the date of application. Residence must be commenced within three months after the application has been confirmed by the Land Board, who may grant leave of absence for a period in special circumstances, such as sickness, drought, &c. Each additional conditional purchase or conditional lease is subject to the condition of residence indicated. The place of residence, may, however, be on any block of the series, so that no necessity exists for a change of residence, and the term may be reduced by the applicant's previous residence on the series, up to, but not exceeding, five years.

The selector is required to enclose his land, within three years after confirmation, with such a fence as the Land Board may prescribe; but he may, at his own option, substitute improvements in lieu of fencing. In such a case, permanent, fixed, and substantial improvements, of the value of 6s. per acre, but not exceeding £384, are required within three years from date of confirmation, and these improvements must be brought up to the value of 10s. per acre, but not exceeding £640, within five years from the date of confirmation. In the case of non-residential purchases, the land must be fenced within one year after date of confirmation, and within five years from that date other improvements to the value of £1 per acre must be effected.

Any conditional purchases, or conditional leases of the same series, may be converted into a homestead selection, provided the holder has been in *bonâ fide* residence for at least six months, and in such case all moneys paid as interest or rent shall be taken as having been paid for the use of the land, and all moneys paid off the purchase money may be credited towards future rent of the selection.

Auction Sales, and After-auction Purchases.

Crown lands are submitted to auction under ordinary or deferred payment systems. Under the ordinary system the balance of purchase money is payable, without interest, within three months of the day of sale, while, under the deferred payment system, the balance is payable by instalments, with 5 per cent. interest, distributed over a longer period, but which cannot exceed five years. In either case, 25 per cent. of the purchase money must be deposited at the time of sale. The only lands that may be sold under the deferred payment system are town and suburban lands, and country lands of a less area than 40 acres. Auction sales, to the extent of not more than 200,000 acres in any one year, are permitted. The upset price is fixed by the Minister for Lands. Town lands cannot be sold in blocks exceeding half an acre, or at a lower upset price than £8 per acre; suburban lands that may be offered at auction must not exceed 20 acres in one block, and the minimum upset price is £2 10s. per acre, and country lands may be submitted in areas not exceeding 640 acres, at an upset price of not less than 15s. per acre. The value of improvements on the land may be added to the upset price. Town and suburban lands, and lands within population areas, or any portion of country lands of a less area than 40 acres, which have been offered at auction and not bid for, may be sold, subject to the Minister's approval, to any applicant at the upset price, and on the same terms and conditions as those under which the land was offered at the auction sale.

Improvement Purchases.

The holder of a miner's right or a business license under the provisions of the Mining Act, which confers the right to occupy a small area within a gold-field, is authorised under the Land Acts to purchase the lands so occupied, provided he has made certain improvements thereon. These improvements must include a residence or place of business, and be of the value of £8 per acre on town land, and £2 10s. on any other land. Not more than a quarter of an acre of town land, and not more than 1 acre of other land, can be purchased, and a distance of 3 miles must separate any two or more portions purchased by the same applicant.

Special Purchases.

Any unnecessary road which bounds or intersects freehold land, may be closed and sold to the freeholder, and any unnecessary road which passes through land held under conditional purchase may be closed and added to the area of the same. In the former case the land is alienated in fee, at a price determined by the Land Board, while in the case of a conditional purchase the price is similarly determined and added to the balance owing on the conditional purchase, the conditional purchaser being required to pay deposit and instalment of purchase money at the same rate as for his original area.

Many Crown grants of land having water frontage contain a reservation, usually 100 feet from high-water mark, and the title of the land so reserved is regarded as remaining in the Crown. It is, however, competent for the Crown to rescind the reservation, and convey the land to the holder of the adjoining land, and in such a case the price of the land is determined by the Land Board.

The owner in fee simple of land having frontage to the sea, or to any tidal water or lake, who desires to reclaim and purchase any adjoining land lying beyond or below high-water mark, may, after depositing £10 in the Treasury, apply to the Under Secretary for Lands to do so, except in the case of Port Jackson, the control of which is vested in the Sydney Harbour Trust Commissioners. No reclamation is authorised which may interrupt or interfere with navigation, and any approved reclamation must be completed to the satisfaction of the Minister, if the land is in the Metropolitan Land District, or to the satisfaction of the Land Board if situated elsewhere. The price to be paid for the land is appraised by the Land Board, on the basis of the enhanced value of the whole holding by reason of the land to be reclaimed having been reclaimed, and being held and enjoyed with the land in fee simple after allowing for cost of reclamation.

Land encroached upon by buildings erected on granted land, or land situated between granted land and a street or road, which forms, or should form, the way of approach to the granted land, or land to which no way of access is attainable, or land which is insufficient in area for conditional purchase, may, subject to the approval of the Land Board, be purchased by the owner in fee simple of the adjoining land, at a price determined by the Board.

Volunteer Land Orders.

Holders of certificates issued to such volunteers as had served efficiently for a certain period under the provisions of the Volunteer Force Regulation Act of 1867, are entitled to a free grant of 50 acres of land. These certificates, a few of which are still outstanding, entitle the holder to 50 acres of such land as may be open to conditional purchase, other than lands within a proclaimed special area.

Exchanges of Land.

Previous to the granting of fixity of tenure in connection with pastoral leases, the lessees had made it a practice to secure portions of their runs by conditional purchases and purchases in fee simple. The practice was, in many instances, disadvantageous to the public estate, as Crown lands were left in detached blocks, severed by lessees' freehold properties, and, moreover, the lessees have realised that it would be convenient to them to gather their freeholds together in one or more consolidated blocks. This can be secured by the Crown accepting a surrender of private lands, and granting lands in exchange elsewhere. Any proposal for an exchange must be the subject of investigation by the Local Land Board, and the giving effect thereto ultimately depends upon the mutual agreement of the private owner and the Crown.

Homestead Selection.

Among the special features of the Act of 1895 was the introduction of the principle of classification and measurement of lands prior to selection. Under this system suitable land is set apart and rendered available for the purposes of the selector. The appropriation of areas for homestead selection is a prominent feature of the Act, and the lands chosen for subdivision are good agricultural lands, which are measured into blocks, each large enough for one family. Where suitable lands are situated within easy access of towns, small blocks are set apart to suit the requirements of business people. The land becomes available for application after particulars relating to area, capital value, &c., are published in the *Gazette*, and the application must be made to the Crown Lands Agent of the district in which the land is situated. The maximum area that may be selected is 1,280 acres; but the selector is limited to a block as gazetted, which may be less than the maximum area. The tenure is freehold, subject to perpetual residence and perpetual rent. The selector is required to deposit one half-year's rent and one-third of the survey fee with his application, the payment of the balance of the latter being spread over a period of two years. The rent, until the issue of the grant, which cannot be issued for five years, or until the expiration of the first six years of the selection, if the grant is not previously issued, is 1½ per cent. of the capital value of the land, which capital value is determined according to the character and situation of the land and the tenure of the holding. The gazetted capital value of the land may be subject to appraisement by the Land Board at the instance of the selector. The Crown Lands Act Amendment Act of 1903 provides that an additional holding may be acquired to make up an area which, with all other lands held by the applicant other than under annual tenure, would not be more than sufficient for the maintenance of the applicant's home in average seasons and circumstances. The additional holding need not necessarily adjoin the original holding, but must, in the opinion of the Land Board, be situated within a reasonable working distance thereof. Under the Act of 1905, by notification in the *Government Gazette*, areas may be set apart as either original or additional holdings, but no area is available for both classes of holdings. Prices, capital value, and rentals of the areas are to be stated in the notification. Any person who is eligible to take up a conditional purchase may apply for a homestead selection. Any improvements on the land are appraised by the Land Board at their value to the incoming tenant, such value in no case to exceed the cost of making those improvements. Should the appraised value exceeed by 20 per cent. the Board's estimated value as notified in the *Gazette*, the applicant is at liberty to withdraw his application and obtain a refund of all payments made. After the issue of the grant the rent is 2½ per cent., and the capital value of the land as unimproved is reappraised every ten years, the first valuation, however, holding good for the first fifteen years. The only expenditure required in improvements is £20 for a dwelling-house within the first eighteen months after confirmation of the application by the Land Board. The other condition is residence, which must commence within three months after confirmation, and is a perpetual obligation. The land cannot be transferred during the first five years, and each successive transferee is required to live on the land while he holds it. Tenant right in improvements is secured, and the holding may be so protected that it cannot, by any legal procedure, or under any circumstances, be wrested from the selector. Holders of conditional purchases may convert their holdings into homestead selections.

Working Men's Blocks.

This tenure has been created by the Blockholders Act, under which workmen may secure a lease of a block for a period of ninety-nine years. The area must not exceed 10 acres, and an applicant can only acquire one block. An applicant must be not less than 18 years of age, and gain his livelihood by his own labour. The rent is determined by the Minister, and is not to be more than 5 per cent. on the capital value of the land, and may be altered after each twenty years of the lease. The lessee, his wife, or child must reside on the land for at least nine months in every year, and must erect a dwelling-house, shop, or warehouse of the value of not less than £100 within twelve months of the execution of his lease, and the lease must be fenced within two years with a batten or paling fence. A blockholder may have his block protected from seizure for debt, except for rates and taxes, provided the debt is incurred after the protection is obtained.

Conditional Purchase Leases.

By notification in the *Government Gazette* areas may be set apart for disposal by way of conditional purchase lease. These areas are subdivided into blocks of such extent that the lessee may by agriculture, dairy-farming, or grazing, either separately or conjointly, establish and maintain a home thereon. The Minister determines the capital value of the lease for the first ten years, being guided in his estimate by the capabilities and situation of the land, the timber thereon, and the means of access thereto. For each succeeding period of ten years the Land Board determines the capital value on a similar basis. The lease is for forty years, at a rental of 2½ per cent. per annum on the capital value. The value of existing improvements to an incoming tenant is appraised by the Land Board. Special conditions may be imposed regarding improvements, cultivation, preservation or planting of timber, or other matters in which the public interests require to be safeguarded.

Any male of the age of 18 years, and any female aged 21, who is not the owner of any land, except town or suburban land, or land held as a tenant from a private holder, may apply for a conditional purchase lease, subject to the condition that the applicant has not divested himself or herself of any land held within twelve months before the date of application. Female applicants must be unmarried or widowed, or living apart from a husband under a decree of judicial separation.

Residence on the lease must be continuous for ten years, and must commence within twelve months from the date of confirmation, but the commencement of residence may be postponed to any date within five years of confirmation on such terms and conditions with regard to improvements and cultivation as may be agreed upon between the Land Board and the lessee. The Board may also permit the residence condition to be performed in any adjacent village or town. At any time after the confirmation of an application, the holder may, by payment of a deposit of 5 per cent. on the capital value of the land, provided that the proper conditions have been observed, convert the area into a conditional purchase, subject to all the unperformed conditions of the lease, except payment of rent. The capital value of the land determined for the period of lease current at the date of conversion is to be the amount of purchase money payable for the land. The balance of purchase money is to be paid by equal annual instalments at the rate of 5 per cent. per annum of such purchase money, each annual instalment to consist of principal and interest at the rate of 2½ per cent. per annum on the unpaid balance, the first instalment being due twelve months after the date of application for conversion. Only a person qualified to take up a conditional purchase lease can acquire by transfer a conditional purchase lease, or a conditional purchase into which it may have been converted. Holders of conditional purchase leases, or conditional purchases into which such leases have been converted, are not qualified to acquire another holding of either class.

Conditional Leases.

A conditional lease may be applied for by any holder of a conditional purchase, other than a non-residential one, or one within a special area in the Eastern Division, the application for which may have been made subsequent to the 1st January, 1885. Lands available for conditional purchase are also available for conditional lease, with the exception of lands in the Western Division, or within a special area or a reserve from lease. Applications are to be made to the Crown Lands Agent of the district, and must be accompanied by a provisional rent of 2d. an acre and a survey fee. The area of the conditional lease or leases applied for by virtue of any conditional purchase cannot exceed three times the area of the purchase, and cannot be less than 40 acres. The area which an applicant may apply for as conditional purchases and conditional leases is restricted to 1,280 acres in the Eastern Division and 2,560 acres in the Central Division; but the Land Board may allow these areas to be exceeded, provided that the area obtained, together with all other lands held by the applicant under whatever tenure, other than annual tenure, does not exceed such an area as, in the opinion of the Board, is sufficient for the maintenance of the applicant's home thereon in average seasons and circumstances. Under the Act of 1905, as previously stated, areas may be set apart for conditional leases to be taken up in virtue of and at the same time as original conditional purchases within the areas, or conditional leases other than these, but no area is available for both classes of holdings. The lease is for a period of forty years, at a rent determined by the Land Board, payable yearly in advance. The terms of the lease are divided into four periods of ten years each, and the annual rent for each period may, on the application of the lessee, or on a reference by the Minister, be determined separately. The conditions of fencing, or substitution of improvements in lieu of fencing, which attach to a residential conditional purchase, apply equally to a conditional lease, and residence is required as in the case of an additional conditional purchase. The holder may convert the whole or part into an additional conditional purchase, which is freed from any residential condition if the lease was applied for before the 1st June, 1895. A conditional lease must be transferred whenever the conditional purchase upon which it depends is transferred.

Settlement Leases.

Another departure under the Act of 1895 is the provision for settlement leases for agricultural and grazing purposes. Under this form of tenancy, lands gazetted as available for settlement lease are obtainable on application, accompanied by a deposit consisting of six months' rent and survey fee. The maximum area of agricultural land which may thus be taken up is 1,280 acres; but in other instances, where it is apparent that the settler must combine agriculture with grazing, and must depend mainly upon the latter for a livelihood, the farms may comprise any area not exceeding 10,240 acres. These areas may be exceeded by means of additional holdings so long as the area obtained, together with all other lands held by the applicant under whatever tenure, other than annual tenure, does not exceed such an area as, in the opinion of the Land Board, is sufficient for the maintenance of the applicant's home thereon in average seasons and circumstances. The additional holding need not necessarily adjoin the original holding, but must, in the opinion of the Land Board, be situated within a reasonable working distance thereof. The Act of 1905 makes provision for areas to be set apart for either original or additional holdings, but no area is available for both classes of holdings. Prices, rentals, &c., are notified in the *Government Gazette*. The lease is issued for a term of forty years, divided into four periods, each of ten years. The annual rent of the first period is that notified before the land is made available for lease; but the lessee may, if dissatisfied, require the rent to be determined by the Board. The annual rent for each succeeding period may, on the application of the lessee, or on reference by the Minister, be separately determined in like manner. Residence is compulsory throughout the whole term, and the land must be fenced within the first five years. Tenant right in improvements is secured to the outgoing lessee, and the lessee may apply at any time after the first five years of the lease for an area not exceeding 1,280 acres, on which his house is situated, as a homestead grant.

Improvement Leases.

Improvement leases may comprise any scrub or inferior land in the Eastern or Central Divisions, and can only be let by auction or tender; or, if not taken up, may be tendered for afterwards at the upset rental. The rent is payable annually, and is not subject to alteration; and the lease is for a period of twenty-eight years, with an area not exceeding 20,480 acres. Upon the expiration of the lease the last holder will have tenant right in improvements. During the last year of the lease the lessee may convert into a homestead selection 640 acres, on which his dwelling-house may be erected.

Leases of Scrub and Inferior Lands.

Scrub leases may be granted on application or disposed of by auction or by tender, but inferior-lands leases may be acquired by auction or tender only. There is no limitation as to area, and in the case of a lease obtained by application the rent is appraised by the Local Land Board. The initial rent of an inferior-lands lease applies throughout the whole term; but it is in the power of the Minister, when offering a scrub lease, to arrange that the term of the lease shall be divided into periods, and that the rent for each period shall be determined by reappraisement. The term of each class of lease cannot exceed twenty-eight years. Leases of inferior lands are subject to such conditions as may be prescribed in the notification in the *Gazette*. The holder of a scrub lease must take such steps as the Land Board may direct for the purpose of destroying such scrub as may be specified in his lease, and must commence to destroy the same within three months from the beginning of the lease, and when destroyed to keep the land free from the same.

Pastoral Leases.

Provision is made in the Crown Lands Act Amendment Act of 1903, whereby the registered holder of any preferential occupation license or occupation license may apply for a lease of an area not exceeding one-third of the total area of the land comprised within the license. After consideration by the Land Board as to whether the land or any part of it is suitable for closer settlement, or is required to enable present holders not having a living area to add to their holdings, the application may be granted wholly or in part for a period not exceeding twenty-eight years, subject to such rent, conditions of improvement, and withdrawal for settlement as may be determined.

Occupation Licenses.

There are two forms of occupation licenses in existence, viz., preferential occupation licenses, comprising the area within the expired pastoral leases in the Eastern and Central Divisions, and ordinary occupation licenses, comprising the parts of the holdings formerly known as resumed areas. Occupation licenses extend from January to December, but may be renewed from year to year on payment of the rent in advance. The rent is determined by the Land Board, and is liable to reappraisement whenever the Minister deems such a course desirable. Any improvements effected by the licensee remain his property during the currency of the license. Any vacant Crown land suitable for occupation license is offered as such by auction or tender, and if not sold or tendered for is open for application at the upset rental specified in the proclamation.

Annual Leases.

Unoccupied land not reserved from lease may be obtained for grazing purposes as annual leases on application to the local Crown Land Agent, and on payment of a deposit of £3 for each 640 acres or part thereof, or they may be offered by auction or tender. No security of tenure is guaranteed, and the land may be alienated by conditional purchase, auction sale, &c. The area is restricted to 1,920 acres in any one lease, but there is no limit to the number of leases any one person may hold. No conditions of residence or improvement are attached to annual leases, and they are renewable from year to year by payment of the rent in advance on or before the 30th September. With respect to leases applied for, the Local Land Board allots the area and appraises the rent.

Special Leases.

Special leases are issued chiefly to meet cases where land is required for some industrial or business purpose, and may be obtained on application, or disposed of at auction or by tender. The term of the lease cannot exceed twenty-eight years. The conditions attached are suitable to the circumstances of each case, and these, together with the rent, payable annually in advance, are determined by the Land Board.

Residential Leases.

The holder of what is termed a "miner's right" or "mineral license" within a gold or mineral field may be granted a residential lease. The application therefor must be made to the local Crown Land Agent, accompanied by a deposit of £1, a provisional rent of 1s. an acre, and the survey fee. The maximum area that may be leased is 20 acres, and the longest term of the lease twenty-eight years. The rent is appraised by the Land Board, and is payable annually in advance. The principal conditions of the lease are residence during its currency and the erection within twelve months from the commencement of the lease of such buildings and fences as are necessary. Tenant right in improvements is conferred upon the lessee.

Snow Leases.

Lands held under annual lease or occupation license, and any vacant Crown lands which for a portion of each year are usually covered with snow, and, consequently, are unfit for continuous use or occupation, are available as snow leases. These lands are offered for lease by auction, and if not sold are open to lease by tender at the upset rental at which they were offered at auction. Not more than two snow leases may be held by or in the interest of one person. The minimum area that may be obtained is 1,280 acres, and the lease must in no case exceed 10,240 acres. The term of the lease is seven years, but upon giving twelve months' notice prior to the expiration of the lease, the lessee may claim an extension for three years.

WESTERN DIVISION.

The Western Division embraces an area of 80,318,708 acres, watered entirely by the Darling River and its tributaries. This part of the State is essentially devoted to pastoral pursuits.

The administration of the Western Division under the "Western Lands Act of 1901" is vested in a Board of three Commissioners, entitled "The Western Land Board of New South Wales," and all Local Land Boards constituted prior to the 1st January, 1902, cease to have jurisdiction within the area. The Commissioners, sitting in open Court, are empowered to exercise all the powers conferred upon Local Land Boards by the Crown Lands Acts, and for all purposes of the Crown Lands Acts shall be a Local Land Board in all cases, as well as in any cases that may be or are required to be referred to any Local Land Board under the provisions of any Act now or hereafter in force.

Subject to existing rights and the extension of tenure referred to in a subsequent paragraph, all forms of alienation, other than by auction and leases, prescribed by the Crown Lands Acts, ceased to operate within the Western Land Division from the 1st January, 1902.

Before any Crown lands in the Western Division, not held under lease, shall become available for lease, the Commissioners must recommend the areas and boundaries of the land to be offered for lease and the rent to be charged therefor, and, should there be any improvements on the land, determine the amount to be paid for them. The Minister may, by giving thirty days' notice in the *Government Gazette*, declare such lands open for lease, and applications therefor must be made to the Commissioners on a prescribed form, accompanied by a deposit at the rate of 20 per cent. on the amount of the first year's rent, as notified in the *Government Gazette*, and the Commissioners may recommend a lease to such applicant as they shall consider most entitled to it. Upon the issue of a lease the notification thereof is published in the *Government Gazette*, and within one month therefrom the successful applicant must pay the balance of the first year's rent and execute the lease within the time and manner prescribed.

The registered holder of a pastoral, homestead, improvement, scrub, or inferior lease or occupation license of land in the Western Division, or in the event of any such holding being mortgaged, then any owner of the equity of redemption in the same, could apply before the 30th June, 1902, to bring his lease or license under the provisions of the "Western Lands Act of 1901." In cases where no application was made to bring the lease or license under the provisions of the Act, such lease or license is to be dealt with as if the Act had not been passed, and the Commissioners as constituted are to be deemed the Local Land Board to deal with such cases.

All leases issued or brought under the provisions of the "Western Lands Act of 1901" expire on the 30th June, 1943, except in cases where a withdrawal is made for the purpose of sale by auction or to provide small holdings, when the Governor shall, after report by the Commissioners, add to the remainder of the lease such term as may be considered reasonable as compensation, but in no case shall it exceed six years.

The rent on all leases current after the commencement of the Act is determined by the Commissioners for the unexpired portion of such leases. No rent or license fee is to be less than 2s. 6d. per square mile or part thereof, and in no case shall the rent or license fee be fixed at a higher rate than 7d. per sheep on the carrying capacity determined by the Commissioners. In the case of new leases, the rents are determined for periods not exceeding ten years, and in the case of leases extended under the provisions of the Act for periods ending 30th June, 1930, and 30th June, 1943. The rent fixed in the cases of existing leases, and for the first term in the case of new leases, cannot on reappraisement be either increased or decreased more than 25 per cent. on the first reappraisement, and the provision applies at each subsequent reappraisement to the rent last determined.

LABOUR SETTLEMENTS.

In the middle of 1893 an Act was passed to establish and regulate labour settlements on Crown lands, following the example set by New Zealand, and imitated by several other States. Under this Act the Minister may set apart certain areas for the purpose of establishing labour settlements. A settlement is placed under the control of a Board, which enrols such persons as it may think fit to become members of the settlement; makes regulations concerning the work to be done; apportions the work among the members; and equitably distributes wages, profits, and emoluments after providing for the cost of the maintenance of the members. Any trade or industry may be established by the Board, and the profits apportioned among the enrolled members. A Board is constituted as a corporate body, with perpetual succession and a common seal; and the land is leased to the Board as such, in trust for the members of the settlement, for a period of twenty-eight years, with right of renewal for a like term.

When a Board has enrolled such a number of persons as the Minister for Lands may approve, it may apply for monetary assistance on behalf of the members of the settlement. The Minister has power to grant an amount not exceeding £25 for each enrolled member who is the head of a family dependent upon him; £20 for each married person without a family; and £15 for each unmarried person. On the expiration of four years from the commencement of the lease, and at the end of each year following, 8 per cent. of the total sum paid to the Board becomes a charge on its revenues, until the total amount advanced, with interest at the rate of 4 per cent. per annum, has been repaid.

On the 30th June, 1906, the only settlements in existence were those at Bega and Wilberforce. At Bega an area of 1,360 acres was attached to the settlement, and on the date specified there were thirty-one men enrolled, and a total population of 202. A sum of £2,421 has been advanced by the Government as a loan, and the value of improvements, exclusive of crops, is £2,296. At Wilberforce, an area of 882 acres was granted for settlement, which was subsequently reduced to 409 acres; and on the 30th June, 1906, there were eleven men enrolled, the total population being 52. The loans from the Government amounted to £2,495, and the value of improvements, exclusive of crops, £2,360.

CLOSER SETTLEMENT.

Under the "Closer Settlement Act, 1901," provision was made for the acquisition of private lands or lands leased from the Crown for the purposes of closer settlement. Lands so acquired were to be divided into farms and leased for a term of ninety-nine years, at an annual rental of not more than 5 per cent. on the capital value of the land, which is to include the cost of the purchase of the land, the value of any necessary roads or reserves, and all expenses incidental to making the land available. No power of compulsory resumption was conferred by the Act, and consequently it was practically inoperative.

Under the "Closer Settlement Act, 1904," which repealed the 1901 enactment, provision was made for compulsory resumption of private land intended to be set apart for closer settlement where the value exceeded £20,000, without taking into account any improvements thereon. The owners of private lands may also offer to surrender the same in consideration of a price to be specifically set out, and such offer is binding on the part of the owner for a period of nine months after the receipt of the offer. The owner, may, also, from time to time, and for such periods as may be agreed between the Minister and himself renew the offer.

Before the land acquired is rendered available for settlement, a plan of the designed subdivision, conclusive as to areas and values, and showing areas and values per acre of the proposed settlement purchases, must be submitted by the Closer Settlement Board to the Minister. The design plan will not only include land acquired under the Act but also any adjacent Crown lands set apart by the Minister for the purpose. The lands can only be dealt with under the Closer Settlement Act, and will be declared a settlement purchase area or areas by notification in the *Government Gazette*. The notification will, in complete terms, describe the lands, declare them available for application, and set out, amongst other things, the class of the land, the capital value for the purposes of each class of holding, and the area in each class which may be applied for to be held in one or two areas. Settlement areas will be notified for disposal in three classes, viz., agricultural lands, grazing lands, and township settlement allotments.

Any male of the age of 18 years and upwards, and any female not being under 21 years, who is not the holder of any land, except town or suburban land, under the Crown Lands Act, or land held under lease, as provided in the Closer Settlement Act, or a township allotment thereunder, or land held as a tenant from a private holder, may apply for land under the Act. It is required, however, that any such person shall not, for the object of applying under the Act, have divested himself or herself of any land held within twelve months before the date of application for a settlement purchase area, and if a female, shall be unmarried or widowed, or, if married, living apart from her husband under an order for judicial separation. Applications are to be lodged with the Crown Lands Agent of the district in which the land is situated, accompanied by a deposit of 5 per cent. of the notified value of the settlement purchase sought to be acquired. Residence for a period of ten years is attached to every settlement purchase, and commences at any time within twelve months after the decision of the Land Board allowing the purchase; but the term may be extended to any date within five years of the allowance of purchase, on such terms and conditions as to improvement and cultivation as may be agreed upon between the Land Board and the purchaser. Residence is held to mean continuous and *bona-fide* living, as the purchaser's usual home, upon the area allotted. Subject to the approval of the Land Board, the residence condition may be performed in any adjacent town or village, and, on due cause being shown, may be suspended, either conditionally or otherwise. Where the land is unimproved, the purchaser is required to effect thereon substantial and permanent improvements to the value of 10 per cent. of the capital value within two years from the date of purchase, and to an additional 5 per cent. within five years, and to a further additional 10 per cent. within ten years from the same date. Existing improvements on the land shall be held to fulfil the condition to the amount of their value. Every purchase is subject to such other conditions and restrictions relating to mining, cultivation, destruction of vermin and noxious weeds, insurance against fire, or other matters as may be prescribed. The purchase money is liquidated in annual instalments at the rate of 5 per cent. of the capital value of the land, with interest at the rate of 4 per cent., and the obligation ceases by effluxion of time in thirty-eight years.

The Governor may set apart and lease land under the Act in areas not exceeding 320 acres. Leases so granted are subject to the following conditions:—Improvements are not to be effected without the written consent of the Minister or Chairman of the Land Board; leases expire on the 31st December, but may be renewed on payment of yearly rent in advance not later than 10th December of the year preceding that in which rent is due; the rent to be appraised by Land Board, and the granting of a lease does not exempt the land from settlement purchase; the Minister may at any time cancel the lease by giving three months' notice in the *Government Gazette*.

Under the provisions of the Closer Settlement Act of 1904, the Government purchased the Myall Creek Estate, consisting of 53,523 acres of acquired lands, valued at £137,795, and 13,166 acres of Crown lands, valued at £24,589, the total area thus taken over being 66,689 acres, of a value of £162,384. The land allotted by the Board to the 30th June, 1906, was subdivided into ninety-eight farms, covering 48,567 acres, and of a total value of £120,445, the acquired lands representing 39,142 acres, valued at £102,656, and the Crown lands 9,425 acres, valued at £17,789. By notification in the *Government Gazette* of the 11th April, 1905, the whole of the reserves and unallotted lands at Myall Creek were made available for closer settlement leases. Up to 30th June, 1906, forty-seven applications were granted at rentals ranging from 3d. to 1s. 6d. an acre. The letting of areas under lease does not prevent them from being sold, as the Act provides that upon lodgment of a valid settlement purchase application, the lease of so much of the land as is applied for thereby ceases and determines. It is hoped that the taking up of so much of the area under leases will be to the benefit of the allotted farms owing to the additional protection against bush and grass fires, the preservation of improvements, and the prevention of trespass.

A township known as Delungra has been surveyed within the settlement purchase area entirely within the Crown lands included in the estate, and seventy-five of the eighty-four lots offered were disposed of for the sum of £747. The district is being developed as rapidly as possible by the making of good roads, while increased educational facilities are being provided by the Department of Public Instruction. The number of persons resident on the estate at the 30th June, 1906, was 257.

COST OF ADMINISTRATION.

The following statement shows the cost of the administration of the Lands Department during the ten and a half years ended 30th June, 1906:—

Year.	Cost of Survey of Lands.	Expenditure for General, Miscellaneous, and Special Services.	Total Cost of Administration.
	£	£	£
1896	123,449	170,169	293,618
1897	120,510	159,837	280,347
1898	120,575	152,784	273,359
1899	122,133	162,437	284,570
1900	129,697	171,052	300,749
1901	129,274	168,265	297,539
1902	137,465	201,356	338,821
1903	133,116	199,119	332,235
1904	123,390	186,771	310 161
1905*	57,036	91,600	148,636
1906†	123,995	180,280	304,275

* Half-year ended 30th June. † Year ended 30th June.

The figures just given might prove misleading without some reference to the revenue received. The following table shows the percentage of total revenue expended on survey and on general expenses for the corresponding period:—

Year.	Percentage of Total Revenue Expended—		
	On Survey.	On General Expenses.	Total.
1896	6·55	9·04	15·59
1897	6·37	8·46	14·83
1898	6·09	7·71	13·80
1899	6·15	8·18	14·33
1900	6·20	8·18	14·38
1901	6·29	8·19	14·48
1902	7·28	10·66	17·94
1903	7·07	10·58	17·65
1904	6·64	10·06	16·70
1905*	5·77	9·26	15·03
1906†	7·15	10·40	17·55

* Half-year ended 30th June. † Year ended 30th June.

The figures just given show considerable variation from year to year; it must, however, be borne in mind that the expenditure on surveying is added in some instances to the cost of the land, and is therefore not altogether a fair charge against administration.

PROGRESS OF ALIENATION.

The growth of land alienation under the legislation of 1861 and its subsequent amendments, and the operations of the settlers under the Acts of 1884, 1889, 1895, and 1903, in the matter of unconditional settlement, are summarised below, the information being brought up to the 30th June, 1906:—

Mode of Alienation.	Lots.	Area.
Sales by auction—	No.	acres.
Town	41,090	19,027
Suburban	16,179	76,134
Country	67,642	9,636,996
Total sales by auction	124,911	9,732,157
Selection after auction	26,330	1,740,866
Sales by virtue of improvements	25,308	2,788,540
,, by virtue of pre-emptive rights	2,135	560,830
,, of unnecessary roads, and roads alienated under the Public Roads Acts of 1897 and 1902	1,073	14,832
,, of rescissions of reservations	224	705
,, by special appraisements	314	3,063
,, of reclaimed lands	672	965
Grand total of unconditional sales	180,967	14,841,958

As regards conditional sales, the following were applied for under the various Acts since the date of the Crown Lands Act of 1861:—

			Selections applied for.	
	No.	Acres.	No.	Acres.
Under the Crown Lands Act of 1861—				
To May 24, 1880			136,389	14,982,120
Under the Crown Lands Act of 1880—				
1880 (from May 25)	4,927	694,951		
1881	14,220	2,329,202		
1882	14,606	2,392,218		
1883	10,674	1,617,712		
1884	10,657	1,453,937		
Total			55,084	8,488,020
Total to December 31, 1884			191,473	23,470,140
Under the Crown Lands Acts of 1884, 1889, 1895 and 1903,—				
1885	5,377	1,165,352		
1886	6,080	963,197		
1887	4,769	793,004		
1888	5,364	865,199		
1889	6,205	903,160		
1890	8,526	1,713,577		
1891	6,153	1,303,094		
1892	4,396	816,399		
1893	3,393	533,805		
1894	2,617	414,355		
1895	1,751	253,431		
1896	1,279	199,450		
1897	1,306	241,789		
1898	1,591	298,138		
1899	1,770	303,113		
1900	2,253	435,116		
1901	2,277	549,898		
1902	2,340	400,710		
1903	2,113	332,886		
1904	2,922	528,102		
1905*	1,456	245,468		
1906†	3,123	496,781		
Total			77,061	13,756,024
Grand total to 30th June, 1906			268,534	37,226,164

* Half-year ended 30th June. † Year ended 30th June.

The number of selections cancelled, forfeited, lapsed, declared void, and converted into homestead selections, together with the balance of such voidances, etc., and that of increased over decreased areas, amounted to 81,541 conditional purchases, covering 11,723,780 acres, thus reducing to 186,993 lots and 25,502,384 acres the number and area of selections which remained in existence at the 30th June, 1906. Deeds have now issued upon 68,374 completed purchases, covering 9,002,561 acres; so that the number of purchases still standing good, but upon which the conditions have not been fulfilled, is 118,619, covering an area of 16,499,823 acres.

Under the Crown Lands Act of 1895, 7,647 applications for homestead selections were received to the 30th June, 1906, the aggregate area applied for being 3,172,217 acres. Of the applications lodged, 5,870, amounting to 2,259,155 acres, were confirmed. Homestead grants to the number of 2,750, comprising an area of 1,087,065 acres, were issued to the 30th June, 1906. The area held under homestead selection on the 30th June, 1906, inclusive of the conversion of conditional purchases and conditional leases, but exclusive of homestead grants, was 984,426 acres.

In addition to the alienation of land by conditional and unconditional sales, the following were granted under the Volunteer Land Regulations of 1867:—

Year.	Area of Volunteer Land Orders granted.	Year.	Area of Volunteer Land Orders granted.
	acres.		acres.
1871	6,049	1890	882
1872	7,317	1891	1,100
1873	2,880	1892	590
1874	7,756	1893	500
1875	14,498	1894	Nil.
1876	18,758	1895	Nil.
1877	14,079	1896	50
1878	13,022	1897	200
1879	26,506	1898	250
1880	18,886	1899	50
1881	13,876	1900	50
1882	5,649	1901	50
1883	4,358	1902	50
1884	4,500	1903	50
1885	1,936	1904	100
1886	740	1905*	219
1887	1,797	1906†	200
1888	1,433		
1889	783	Total	169,164

* Half-year ended 30th June † Year ended 30th June.

The following table shows the area of land granted for general and religious purposes from 1862 to 30th June, 1906:—

Year.	Area of Grants.	Year.	Area of Grants.	Year.	Area of Grants.
	acres.		acres.		acres.
1862	857	1878	1,811	1894	41,678
1863	808	1879	21,762	1895	7,591
1864	301	1880	20,637	1896	3,186
1865	2,855	1881	7,113	1897	3,646
1866	12,288	1882	1,969	1898	16,780
1867	13,935	1883	2,535	1899	1,499
1868	11,310	1884	6,625	1900	1,890
1869	3,672	1885	481	1901	1,596
1870	11,970	1886	11,100	1902	1,785
1871	4,319	1887	5,377	1903	463
1872	1,969	1888	3,310	1904	1,290
1873	2,535	1889	1,902	1905*	25
1874	6,626	1890	1,566	1906†	1,447
1875	673	1891	916		
1876	5,557	1892	8,735	Total	267,122
1877	2,899	1893	5,833		

* Half-year ended 30th June. † Year ended 30th June.

Consequent on resumptions during the years quoted, the area actually dedicated for the purposes specified on the 30th June, 1906, amounted to 238,759 acres.

The operations of the various Orders, Regulations, and Acts of Council and of Parliament for the disposal of the public lands, since the foundation of the State, have given the following results:—

	Acres.
Area granted and sold by private tender and public auction at prices ranging from 5s. to 20s. per acre, prior to the year 1862	7,146,579
Area unconditionally sold, 1862 to 30th June, 1906, inclusive	14,841,958
Area conditionally sold, for which deeds have issued, 1862 to 30th June, 1906, inclusive	9,002,561
Area granted under Volunteer Land Regulations of 1867 to 30th June, 1906	169,164
Area granted for public purposes, less resumptions, 1862 to 30th June, 1906	238,759
Homestead grants issued to 30th June, 1906	1,087,065
Total area alienated to 30th June, 1906	32,486,086
Area in process of alienation under system of deferred payments standing good on 30th June, 1906	16,499,823
Area in process of alienation under system of homestead selection, including area of conditional purchases and conditional leases converted into homestead selections	984,426
Total alienated or in process of alienation	49,970,335

It has been found impracticable to separate the area alienated by grant from that sold by private tender, as the records of early years are incomplete upon this point.

The following statement shows the amount paid for lands purchased from the State from the year 1821 to the end of June, 1906:—

Period.	Amount received.
	£
1821-1861	3,785,002
1862-1871	2,359,548
1872-1881	17,015,358
1882-1891	13,917,457
1892-1901*	11,995,452
1902-1906	4,027,877
Total received	53,100,694
Less refunds	1,579,165
Net amount received £	51,521,529

* To 30th June.

This sum includes £25,632,595 paid on account of conditional purchases. The amount outstanding on conditional purchases at the 31st December, 1905, was £7,973,154, making the total amount paid and owing on all lands sold £59,494,683.

The area leased to pastoral tenants and others at the end of June, 1906, comprised 123,015,992 acres (including leases to miners under the Mining Act), and was subdivided as follows:—

	Acres.
Pastoral Leases	3,668,661
Leases to outgoing Pastoral Lessees	656,340
Occupation Licenses	14,178,030
Conditional Leases	15,776,651
Conditional Purchase Leases	30,598
Homestead Leases	2,616,472
Annual Leases	5,846,127
Settlement Leases	5,113,847
Improvement Leases	6,275,138
Western Lands Leases	65,690,582
Other Leases	3,015,195
Leases under the Mining Act	148,351
Total	123,015,992

The total available area of the State is 198,634,880 acres, and deducting the area sold and otherwise alienated, 49,970,335 acres, and the area leased, 123,015,992 acres, making a total of 172,986,327 acres, there remained a balance of 25,648,553 acres, representing the area of country neither alienated nor leased, including roads, unoccupied reserves, land unsuitable for settlement, and water.

AREA AVAILABLE FOR SETTLEMENT.

In 1895 attention was again directed to the question of land legislation, as it was rightly contended that the Lands Acts of 1884 and 1889 had failed to prevent the accumulation of enormous landed estates in the hands of a very limited number of proprietors, backed up by the great financial institutions of the country. Although it may be said in defence of the policy pursued by this class of landowners, that in many cases it was forced upon them by the defective nature of legislation which failed to discriminate between the very different interests of the pastoralists and the agricultural settlers, it must nevertheless have been patent to everybody that the rate at which these immense alienations of the public estate were being carried on threatened in a very short period of time to place formidable obstacles in the path of healthy settlement. The Acts mentioned have now, however, been superseded by the Crown Lands Act of 1895, which came into operation on the 1st June of that year. As has already been shown, many radical changes in land legislation have been effected by this Act; but it must be borne in mind that immediate remedial action can only be taken in connection with that portion of the Crown lands which has not yet been alienated or leased to Crown tenants for a definite period of years. Leases granted under certain conditions, such as those attached to conditional leases, which carry with them the right of purchase at any time during their currency, may be considered to be in effect a form of alienation, as but a comparatively small portion of these areas is ever likely to return to the public estate. Lands under homestead leases in the Western Division not brought under the Western Lands Act, scrub lands, snow-covered areas, inferior lands, settlement lease, improvement lease, leases to outgoing pastoral lessees, leases for long periods of fixed tenure, as well as leases under the Western Lands Act for long terms, form another category of lands upon which past legislation lays a prescriptive claim. The area which can be beneficially affected by the Act of 1895 is, therefore, limited to the area which is unalienated, or for which contracts have not been entered into, further reduced by the excision of reserves for public purposes, for gold-fields and other forms of mining enterprise, and for railways and other purposes. At the end of June, 1906, there were 32,486,086 acres absolutely alienated, for which deeds had issued; 16,499,823 acres conditionally sold, the conditions of purchase not being complete; 984,426 acres alienated and in process of alienation under the system of homestead selection, subject to the payment of rent in perpetuity; and 15,807,249 acres leased with the right to purchase; in all, 65,777,584 acres which have been placed entirely beyond the scope of present or future legislation.

The areas under long contracts of lease, in some cases with right of renewal, which no legislation can effect until the expiration of the fixed period of the tenure, are given below:—

	Acres.
Pastoral Leases, Western Division, not brought under Western Lands Act	3,668,661
Leases to Outgoing Pastoral Lessees, Central Division	656,340
Homestead Leases (not brought under Western Lands Act) for 28 years	2,616,472
Scrub Leases for 21 years, with right of renewal for a further period of 7 years	2,029,949
Snow Leases for 7 years, with right of renewal for a further period of 3 years	45,812
Leases of inferior lands, etc., for 20 years, with right of renewal for a further period of 8 years	247,339
Leases under Western Lands Act, current to 1943	51,531,431
Settlement Leases for 40 years	5,113,847
Improvement Leases for 28 years	6,275,138
Other Leases	840,455
Total	73,025,435

The entire area affected by contracts existing at the end of June, 1906, amounted, therefore, to 138,803,019 acres, and these figures show how greatly the extent of territory to which remedial legislation is applicable has diminished. Of the balance, amounting to 59,831,861 acres, a large portion comprises reserves of various kinds; and if allowance be made for mountainous and other sterile lands, it will probably be found that the area suitable for occupation which the State has to offer to intending settlers is somewhere about 44,000,000 acres.

The progress of alienation and conditional settlement by purchase and lease at various periods from 1861 to 1884, and annually since the last-mentioned year, is shown in the following table:—

At end of year.	Area Alienated for which deeds have issued.	Area Conditionally Purchased, standing good on 31st December.	Area Conditionally Leased on 31st December.	Area under Homestead Selection, exclusive of Homestead Grants.	Area under Homestead Grant.
	acres.	acres.	acres.	acres.	acres.
1861	7,146,579	....	....	....	....
1871	8,630,604	2,280,000	....	....	....
1881	22,406,746	12,886,879	....	....	....
1884	22,779,733	16,004,689	....	....	....
1885	22,872,366	16,464,586	1,900,800	....	....
1886	22,991,208	16,856,912	3,955,200	....	....
1887	23,106,700	17,202,286	4,802,560	....	....
1888	23,259,048	17,449,042	6,121,600	....	....
1889	23,442,013	17,907,431	6,928,804	....	....
1890	23,615,720	19,035,515	9,903,949	....	....
1891	23,775,410	19,793,321	11,234,131	....	....
1892	23,937,392	20,102,896	14,370,803	....	....
1893	24,138,576	20,201,790	12,707,423	....	....
1894	24,358,717	20,304,034	12,870,191	....	....
1895	24,566,945	20,253,489	12,953,203	25,951	....
1896	24,712,939	20,198,630	13,260,052	324,842	....
1897	24,853,074	20,224,892	13,150,749	620,414	....
1898	25,081,572	20,243,738	13,118,444	1,037,228	....
1899	25,374,603	20,212,508	13,354,733	1,241,214	....
1900	25,856,698	20,130,259	13,578,035	1,390,731	....
1901	26,408,169	20,044,703	13,980,942	1,491,073	35,385
1902	27,464,199	19,369,027	14,339,481	1,479,751	194,702
1903	28,292,915	18,823,660	14,750,348	1,262,774	472,175
1904	29,968,317	18,100,517	14,252,412	1,195,970	662,833
1905*	30,721,430	17,672,150	14,064,451	1,125,271	808,672
1906†	32,486,086	16,499,823	15,807,249	984,426	1,087,065

* Half-year ended 30th June. † Year ended 30th June.

As already pointed out, the land held under conditional lease is virtually alienated, seeing that the holder has the right of converting his lease into a freehold at any time during its currency.

EFFECTS OF LAND LEGISLATION.

The lands specially referred to in the following examination are those included in rural holdings over 1 acre in extent, from which the agricultural and pastoral production of the country is obtained, municipal areas being dealt with separately, as regards extent and revenue, in another part of this volume. In the preceding pages an account has been given of the old methods of land alienation, and of the various Acts of Parliament which now regulate the division of the public estate among the settlers. The object of the examination which follows is to show what have been the effects of past and present legislation upon the settlement of the territory.

When the agitation which culminated in the framing of the Crown Lands Act of 1861 was in progress, it was contended that the Orders-in-Council then in force favoured the occupation of the country lands by the wealthier classes, and the principles of free selection before survey and of deferred payments were introduced in the new legislation, with the object of facilitating the settlement of an agricultural population side by side with the great pastoral tenants of the Crown. The statistical records for the year 1861 show that at the close of that year, and just before the new legislation had come into force, there were already 21,175 holders of rural lands, of whom 17,654 were located in the old settled districts, comprising twenty counties, grouped around three principal centres—the metropolis and the county of Cumberland, the Hunter River Valley, and that portion of the central tableland of which Goulburn, Bathurst, and Mudgee were the first towns; while the remaining 3,521 settlers were scattered over the pastoral districts. The figures showing the area held by these settlers do not discriminate between the land alienated and that occupied under lease from the Crown; but they show that in the old settled districts there were some 254,347 acres under cultivation—or an average of 14 acres per holding—and 8,522,420 acres used for stock; whilst in the pastoral districts 43,228 acres were cultivated, and 54,716,463 acres were occupied for grazing; so that, at that time, 63,536,458 acres, representing about one-third of the territory of the State, were already in the occupation of the settlers.

In addition to the clauses inserted in the Act of 1861 in the interests of colonists of small means, certain provisions were retained which secured the interests accrued to the pastoralists under former legislation, of which they availed themselves to the utmost. By means of auction sales of country lands at the upset price of 20s. per acre, of unconditional selections of lots not bid for at auction, of purchases made in virtue of improvements, and of the right of pre-emption to certain lands under the old Acts of Council, the accumulation of immense estates was greatly facilitated. The sales of lands subject to conditions of residence and improvements, though ostensibly made to foster the settlement of a numerous class of small farmers, were also availed of in the interests of station owners, to whom the purchases were transferred in great numbers immediately upon completion of the conditions of residence and improvements required under the Act. The evils resulting from the antagonistic interests of these two classes of settlers were partly checked by the amended law of 1884, which put a stop to the wholesale alienation of land by auction, unconditional selection after auction, and sales in virtue of pre-emptive rights. The clause relating to improvement purchases was also modified, and made applicable only to small areas in gold-fields which might be purchased by resident miners in virtue of certain improvements; and the area offered at auction sales was restricted to a maximum of 200,000 acres yearly; but conditional settlement was favoured by permitting the maximum area allowed to be taken up by free selectors to be considerably increased, the conditions of residence being increased to five years instead of three, and the fulfilment of the conditions of fencing and improvements rendered more stringent.

These regulations, however, did not, in any sense, fulfil the expectation of the legislators in regard to settling a yeomanry upon the soil, as the figures relating to transfers of conditional purchases published further on will show that, when other means of increasing the area of individual estates failed, the traffic in transfers of conditionally-purchased lands, with increased areas, supplied the deficiency. The radical change introduced by the Land Act of 1895, necessitating continuous residence for a period of ten years in respect of original conditional purchases, and a further term of not less than five years in connection with additional purchases, has had the effect of considerably reducing the number of applications lodged. The following table shows the transactions under each class of conditional purchase since the Crown Lands Acts of 1884, 1889, and 1895 have been in operation, and indicates very clearly that the speculative element is being largely eliminated :—

Year.	Original Conditional Purchases.		Additional Conditional Purchases.		Non-residential Conditional Purchases.		Total.	
	No.	Area.	No.	Area.	No.	Area.	No.	Area.
		acres.		acres.		acres.		acres.
1885	2,436	773,461	2,639	344,084	302	47,807	5,377	1,165,352
1886	2,738	589,230	2,987	330,280	355	43,687	6,080	963,197
1887	2,369	538,080	2,196	232,597	204	22,327	4,769	793,004
1888	2,705	587,869	2,356	249,503	303	27,827	5,364	865,199
1889	3,043	572,802	2,856	300,532	306	29,826	6,205	903,160
1890	3,797	1,004,421	4,477	678,764	252	30,392	8,526	1,713,577
1891	3,068	778,348	2,920	506,034	165	18,712	6,153	1,303,094
1892	2,134	425,456	2,145	380,059	117	10,884	4,396	816,399
1893	1,932	308,696	1,398	219,835	63	5,274	3,393	533,805
1894	1,462	201,420	1,099	208,663	56	4,272	2,617	414,355
1895	959	141,858	773	110,320	19	1,253	1,751	253,431
1896	765	104,677	492	93,025	22	1,748	1,279	199,450
1897	769	101,082	513	138,810	24	1,897	1,306	241,789
1898	844	103,951	725	192,183	22	2,003	1,591	298,137
1899	941	120,796	788	177,914	41	4,403	1,770	303,113
1900	1,100	144,241	1,122	288,177	31	2,698	2,253	435,116
1901	1,036	145,990	1,216	401,625	25	2,283	2,277	549,898
1902	1,048	128,649	1,231	267,006	61	5,055	2,340	400,710
1903	980	117,538	1,073	209,122	60	6,237	2,113	332,897
1904	1,132	161,127	1,760	363,491	30	3,484	2,922	528,102
1905*	657	99,601	776	143,936	23	1,931	1,456	245,468
1906†	1,438	212,744	1,647	280,386	38	3,651	3,123	496,781

* Half-year ended 30th June. † Year ended 30th June.

The experience of the past ten years goes to show that the new features introduced by the Land Act of 1895 are meeting with considerable favour at the hands of those desirous of acquiring a holding for themselves, notwithstanding the fact that the residence involved is continuous and for a lengthy period. The following table indicates the operations in respect of homestead selections and settlement leases for the period since their inception :—

Year.	Homestead Selections.		Settlement Leases.	
	No.	Area.	No.	Area.
		acres.		acres.
1895	202	62,576	75	206,913
1896	1,187	362,874	314	1,012,389
1897	896	367,291	326	902,390
1898	1,081	461,646	531	1,447,080
1899	833	329,128	413	1,138,726
1900	609	260,568	189	480.846
1901	524	203,309	289	866,151
1902	387	145,836	109	371,726
1903	240	96,715	105	352,707
1904	1,040	618,675	494	1,214,993
1905*	263	104,860	148	412,245
1906†	383	158,739	271	967,836

* Half-year ended 30th June. † Year ended 30th June.

The principal element which contributed to the aggregation of great landed estates was that of auction sales of country lands, which were measured in vast areas upon the application of the run-holders, who bought them up generally at the upset price—at first a minimum of £1 per acre, raised in 1878 to £1 5s. per acre.

The following analysis of the different methods by which lands have been alienated will account for the present state of rural settlement. Particulars of the auction sales of country lands from the year 1862 to the 30th June, 1906, inclusive, are given hereunder.

Year.	Lots.	Total Area.	Amount realised.	Average Price per Acre.
	No.	acres.	£	£ s. d.
1862	532	29,729	33,208	1 2 4
1863	765	15,392	18,163	1 3 7
1864	542	31,393	35,549	1 2 0
1865	1,289	63,303	71,532	1 2 7
1866	801	65,799	68,197	1 0 9
1867	806	70,701	75,432	1 1 4
1868	729	50,636	52,169	1 0 7
1869	1,236	93,428	96,364	1 0 8
1870	797	51,722	54,010	1 0 11
1871	1,034	49,303	50,270	1 0 5
1872	697	61,073	61,505	1 0 2
1873	2,274	274,581	278,110	1 0 3
1874	4,064	580,753	596,785	1 0 6
1875	6,658	978,377	992,786	1 0 3
1876	8,040	1,685,645	1,707,323	1 0 3
1877	8,330	1,829,607	1,838,457	1 0 1
1878	4,564	861,049	1,071,486	1 4 10
1879	2,012	353,372	447,557	1 5 4
1880	2,082	346,679	419,523	1 4 2
1881	2,691	523,657	616,309	1 3 6
1882	2,474	503,547	630,494	1 5 0
1883	226	25,826	41,268	1 11 2
1884	397	38,215	72,412	1 17 11
1885	51	1,654	5,513	3 5 10
1886	793	58,088	100,627	1 14 8
1887	1,124	103,748	158,747	1 10 7
1888	1,781	100,128	230,294	2 6 2
1889	482	18,430	42,389	2 6 3
1890	686	66,160	113,795	1 14 5
1891	703	44,348	89,139	2 1 8
1892	896	80,062	148,115	1 17 0
1893	1,019	91,964	175,115	1 18 1
1894	699	42,973	86,125	2 0 1
1895	485	19,990	57,008	2 2 3
1896	325	11,214	25,751	2 5 11
1897	423	21,821	37,717	1 14 6
1898	651	50,546	85,540	1 13 10
1899	399	37,855	57,367	1 10 3
1900	745	74,504	109,692	1 9 5
1901	516	46,173	73,870	1 11 11
1902	559	46,763	77,378	1 13 1
1903	582	38,211	68,088	1 15 7
1904	868	50,309	82,767	1 12 11
1905*	269	20,152	28,829	1 8 7
1906†	496	18,119	32,877	1 16 3
Total	67,642	9,626,999	11,215,652	1 3 4

* Half year ended 30th June. † Year ended 30th June.

These figures show that the struggle between selector and squatter did not begin in earnest until about the year 1873, when the effects of the legislation of 1861 were felt in an acute form; but during the ten years that followed, this process of defence was applied in a wholesale manner by the pastoral tenants to save their possessions from encroachment through the operations of the selectors. The system was modified by the legislation of 1884, the object of auction sales of country lands now being to obtain revenue by the sale of select parcels of land at a higher average price and in much smaller average areas. Since the year mentioned, this system of alienation has ceased to be of use in consolidating large pastoral estates.

Among other means offered for the unconditional purchase of Crown lands, that of indiscriminate selection at the upset price of lots not bid for at auction also disappeared with the passing of the Act of 1884. The following table shows the results of this system of purchase during the period 1862 to 1883, when it was in operation :—

Year.	Lots.	Total Area selected.	Year.	Lots.	Total Area selected.
	No.	acres.		No.	acres.
1862	477	22,347	1874	1,112	98,850
1863	362	17,384	1875	1,343	101,718
1864	248	12,388	1876	1,126	95,681
1865	251	12,582	1877	1,364	158,844
1866	332	16,413	1878	893	122,812
1867	270	15,803	1879	....	....
1868	283	18,589	1880	182	39,408
1869	545	39,085	1881	1,605	328,203
1870	367	23,375	1882	2,240	353,093
1871	340	23,700	1883	209	31,381
1872	929	83,733			
1873	1,272	101,587	Total.........	15,750	1,716,976

From a comparison of the above figures with those shown in the preceding table, it will be seen that during the years 1881 and 1882 this form of unconditional purchase was largely availed of to supplement the direct purchases at auction.

The lands claimed in virtue of a pre-emptive right, a form of alienation which was also abolished by the Crown Lands Act of 1884, added the following quota to the areas bought in the interests of the pastoralists :—

Year.	Lots.	Total Area sold.	Year.	Lots.	Total Area sold.
	No.	acres.		No.	acres.
1862	117	30,619	1874	....	....
1863	217	58,032	1875	....	....
1864	47	13,128	1876	780	189,664
1865	75	23,459	1877	367	81,193
1866	76	25,616	1878	15	4,063
1867	78	30,039	1879	25	6,033
1868	139	52,260	1880	30	6,912
1869	18	7,617	1881	35	7,461
1870	9	3,718	1882	29	5,183
1871	21	8,623	1883	23	2,338
1872	9	3,379			
1873	4	1,488	Total.........	2,114	560,825

An examination of the figures in the tables just given shows that during the ten years from 1873 to 1882 the area alienated, principally with the object of consolidating pastoral properties, and of securing them against the operations of conditional purchasers, amounted to 11,189,082 acres, made up as follows:—

Year.	By Auction Sales (Country Lots).	Unconditionally sold by Selection.	Improved Lots sold to Owners of Improvements.	Sold by Pre-emption.	Total.
	acres.	acres.	acres.	acres.	acres.
1873	274,581	101,587	10,587	1,488	388,243
1874	580,753	98,850	20,546	....	700,149
1875	978,377	101,718	49,852	....	1,129,947
1876	1,685,645	95,681	86,099	189,664	2,057,089
1877	1,829,607	158,844	159,848	81,193	2,229,492
1878	861,049	122,812	224,841	4,063	1,212,765
1879	353,372	....	121,062	6,033	480,467
1880	346,679	39,408	237,646	6,912	630,645
1881	523,657	328,203	474,099	7,461	1,333,420
1882	503,547	353,093	165,031	5,183	1,026,854
Total......	7,937,267	1,400,196	1,549,611	301,997	11,189,071

The consolidation of pastoral estates did not suffer a serious check when the clauses of the Act of 1861, above cited, ceased to operate, as the transfer of conditional purchases supplied fresh means by the gradual absorption of a very large number of selections, principally in the Central and Western Divisions.

A comparison of the areas dealt with in the following table shows how fast the original conditional purchasers of Crown lands are dispossessing themselves of their holdings, whilst the area selected does not exhibit a tendency to increase at anything like the same rate. An examination of the table reveals the fact that since 1882 there have been 46,006,033 acres of conditional purchases transferred, as against 19,219,901 acres applied for—a difference of 26,786,132 acres, which have to a very large extent gone to increase the large estates, distinctly to the detriment of healthy settlement:—

Year.	Selections.		Transfers.	
	Number.	Acreage.	Number.	Acreage.
1882	14,606	2,392,218	8,665	2,134,319
1883	10,674	1,617,712	6,213	1,508,583
1884	10,657	1,453,937	6,017	1,525,456
1885	5,377	1,165,352	9,079	2,286,730
1886	6,080	963,197	7,154	1,861,877
1887	4,769	793,004	7,440	2,159,429
1888	5,364	865,199	10,469	3,096,051
1889	6,205	903,160	14,395	2,327,562
1890	8,526	1,713,577	13,392	1,863,508
1891	6,153	1,303,094	16,727	2,333,808
1892	4,396	816,399	14,017	2,060,130
1893	3,393	533,805	12,581	1,825,097
1894	2,617	414,355	11,235	1,617,263
1895	1,751	253,431	11,517	1,785,011
1896	1,279	199,450	11,264	1,777,783
1897	1,306	241,789	11,896	1,875,059
1898	1,591	298,137	11,457	1,972,209
1899	1,770	303,113	11,062	1,686,002
1900	2,253	435,116	12,874	1,881,021
1901	2,277	549,898	13,877	2,011,148
1902	2,340	400,710	11,384	1,649,637
1903	2,113	332,897	11,706	1,651,176
1904	2,922	528,102	10,228	1,463,754
1905*	1,456	245,468	4,386	581,797
1906†	3,123	496,781	7,061	1,071,623
Total...........	112,998	19,219,901	266,096	46,006,033

* Half year ended 30th June. † Year ended 30th June.

It must be remembered, however, that a proportion of these transfers was made by way of mortgage, and therefore it is not possible to ascertain the area absolutely transferred by the original selectors; but if to the area parted with by its owners since 1882 be added the extent of land transferred during the previous twenty years, the fact that 22,734,915 acres out of the total area alienated are now contained in 720 holdings, giving to each one an average domain of 31,570 acres, is easily accounted for. The number of holdings, however, does not represent the number of owners interested, as in not a few cases these large estates are held in partnership by three or four persons, or by companies and financial corporations.

RURAL SETTLEMENT.

Excluding from consideration land held by the tenants of the Crown, there were in the State of New South Wales at the end of March, 1906, 77,136 holdings of 1 acre and upwards in extent. Twenty-five years previously the number of such holdings was 39,992. The number has increased during the period by nearly 93 per cent., while the area comprised in the holdings advanced from 24,193,318 acres to 48,728,542 acres, the increase representing over 101 per cent. The average area of alienated holdings gradually rose from 753 acres in 1882 to 770 acres in 1883; between 1884 and 1892 this average increased very little, while since 1893 the figures exhibit a downward movement, falling to 632 acres in 1906. This decline in the average area is due to the increase in the number of small holdings, the advance in this respect having been pronounced since 1872. The following table shows the annual average for the last twenty five years:—

Year ended 31st March.	Average size of Holding.	Year ended 31st March.	Average size of Holding.
	acres.		acres.
1882	753	1895	707
1883	770	1896	699
1884	770	1897	688
1885	762	1898	666
1886	778	1899	664
1887	780	1900	662
1888	778	1901	663
1889	795	1902	658
1890	787	1903	654
1891	780	1904	641
1892	784	1905	635
1893	750	1906	632
1894	748		

The subjoined table shows the number of holdings in different classes at various terms of the period named:—

Area.	Year ended 31st March.						
	1880.	1885.	1890.	1895.	1900.	1905.	1906.
	No.	No.	No.	No.	No.	No.	No.
Under 16 acres	4,974	5,409	7,290	12,301	16,631	20,584	21,270
16 to 200 acres	21,302	20,998	22,048	25,707	28,971	30,261	30,402
201 to 400 acres	6,199	6,363	6,774	8,299	8,780	9,582	9,790
401 to 1,000 acres	4,964	6,497	6,849	7,569	8,132	9,011	9,171
1,001 to 2,000 acres	1,212	1,886	2,191	2,475	2,728	3,161	3,363
2,001 to 10,000 acres	940	1,413	3,910	2,013	2,162	2,351	2,420
10,001 acres and upwards	327	513	658	656	694	722	720
Total	39,918	43,079	49,720	59,020	68,098	75,672	77,136

The holdings under 16 acres in extent are, generally speaking, in the vicinity of towns, and consist mainly of gardens or orchards, and the large increase in their number is what would naturally be expected from the growing demand for their produce by a large urban population. The least satisfactory feature in the table is the fact that the number of holdings of moderate size does not greatly increase. In 1880 the holdings having an area of from 16 to 400 acres numbered 27,501, while in 1906, they numbered 40,192, showing an advance of only 46 per cent. On the other hand, the larger holdings have increased at more than twice that rate; for the year ended 31st March, 1906, there were 15,674 holdings of 401 acres and upwards in extent, compared with 7,443 in 1880, or an increase of over 110 per cent. during this short period. . The area of holdings, as returned by occupiers, in quinquennial periods since 1880, is given below :—

Year ended 31st March.	Total Area of Holdings.
	acres.
1880	22,721,603
1885	32,843,317
1890	37,497,889
1895	41,736,073
1900	45,086,209
1905	48,081,314
1906	48,728,542

The area of unenclosed land in 1880 amounted to rather more than one-fifth of the total extent of the holdings; but in the beginning of 1906 the area unenclosed was only 1,341,665 acres, being less than 3 per cent. of the total area occupied. This result is due partly to the operation of legislation, and partly to the saving of labour which fencing enables occupiers to effect.

For the purpose of an examination of the statistics showing the present state of the settlement of alienated land in New South Wales, it is found convenient to extend the inquiry successively to the various parts of the State in the order in which they were opened up, following the march of settlement in each of the zones into which the country may be geographically divided, viz., the coast, the tableland, the western slope of the Great Dividing Range, the western plains, Riverina, and the Western Division. Each zone, having its own special character, offers to the settler different natural resources according to its climatic conditions. Proceeding from the metropolis as a centre, settlement extended first along the coast, then to the central and more readily accessible parts of the tableland, following afterwards the course of the great inland rivers towards the southern and western parts of the State; thence to the great plains of the west, spreading slowly across the River Darling to the confines of the territory. Nature assisted by legislation contributed to the shaping of settlement into its present form—the natural course of events, however, being at times interrupted by sudden rushes of population to points scattered over the surface of the country, even to its remotest extremities. From the tables which follow it will be seen that the holdings are distributed into series of various areas, comprising six distinct classes of holders of alienated land, viz:—(1) Persons who occupy their own freeholds; (2) persons occupying holdings which they rent from the freeholders; (3) owners of land who rent from other private owners lands which they work in addition to their own freeholds; (4) persons who, in addition to their freehold, rent from the Crown areas which are generally devoted to the depasturing of stock; (5) persons who, in addition to renting from private owners, are also Crown tenants; and (6) persons who, in addition to working their freehold, are both Crown and private tenants. In some districts the system of working on shares is to a certain extent in vogue—the owner finding the land and capital to work the farms, and the other party the labour. This system has not yet attained sufficient importance to warrant a special record of the particulars regarding the land worked under it, for out of a total area of 2,644,408 acres under cultivation on alienated holdings, only 402,234 acres are tilled on the share system, 187,102 acres of which are situated within the Riverina Division.

METROPOLITAN DISTRICT.

That part of the county of Cumberland which embraces the area of the metropolis and its suburbs is outside the limits of this examination, as it is not intended to inquire into the present condition of urban settlement; but it may be stated, nevertheless, that as regards the subdivisions and the distribution of landed property in the city and suburbs of Sydney there is now little difference between this and much older communities. The figures given below refer only to rural settlement in the remaining portion of this country, where the first attempts to colonise were made:—

Police Districts of the County of Cumberland.	Occupiers of—						Area Alienated.		
	Freehold.	Private Rented.	Partly Freehold and partly Private Rented.	Freehold with Crown lands attached.	Partly Freehold, partly Private Rented, and partly Crown lands.	Total.	Freehold.	Private Rented.	Total.
	No.	No.	No.	No.	No.	No.	acres.	acres.	acres.
Metropolitan	2,973	1,654	121	5	....	4,753	46,102	27,914	74,016
Ryde	1,300	168	32	..	....	1,500	28,272	2,394	30,666
Parramatta	1,442	270	89	1	....	1,802	47,481	17,513	64,994
Liverpool	983	209	52	..	....	1,244	43,077	18,986	62,063
Camden (part of)	79	48	18	..	....	145	19,531	16,420	35,951
Campbelltown	253	101	38	..	1	393	31,008	22,433	53,441
Wollongong (part of)	104	27	11	3	1	146	11,153	2,426	13,579
Windsor (part of)	602	190	65	5	1	863	56,129	13,539	69,668
Penrith (part of)	774	249	94	..	....	1,117	63,443	54,915	118,358
Total	8,510	2,916	520	14	3	11,963	346,191	176,545	522,736

In this part of New South Wales, outside towns and purely suburban areas, 522,736 acres are alienated in holdings ranging from 1 acre upwards. Of this area, 346,191 acres, or 66·22 per cent., are in the occupancy of the owners of the land; whilst 176,545 acres, or 33·78 per cent., are leased to tenant occupiers. There are 8,510 persons occupying their own freeholds, 2,916 tenants of private land, 520 persons who both own and rent from private persons portions of their holdings, 14 owners of freehold with Crown lands attached, and 3 owners of freehold who are also tenants of the Crown and private persons. The area of alienated land enclosed in the district is 445,136 acres, and unenclosed 77,600 acres. The area in cultivation is 45,991 acres. Persons working their own land cultivate 34,406 acres, and occupiers of private rented land 11,585 acres.

From the number of rural land-holders in this district it is evident that the average area held by each cannot be very large. In the Police District of Camden it reaches 248 acres; in Campbelltown Police District, 136 acres; in Penrith, 106 acres; and in Wollongong, 94 acres. In Windsor and in Liverpool the average is 81 and 50 acres respectively; in Parramatta, 36; while for Ryde it is only 20, and for the Metropolitan Police District only 16. The average area for the whole division is 44 acres per holding.

The holdings in this division may be classified as follows:—

Size of Holdings.	Alienated Holdings.	Area of Holdings.		Area in Cultivation.	
		Total.	Proportion to Total Area alienated in District.	Total.	Proportion to Area of Holdings.
	No.	acres.	per cent.	acres.	per cent.
1 to 30 acres	9,454	70,849	13·55	16,752	23·64
31 to 400 acres	2,298	213,622	40·87	23,662	11·06
401 to 1,000 acres	144	92,251	17·65	2,506	2·71
1,001 acres and upwards	67	146,014	27·98	3,071	2·10
Total	11,963	522,736	100·00	45,991	8·79

There are 30 lessees of Crown lands occupying an area of 5,590 acres—293 acres being held under conditional lease, and 5,297 acres under other forms of tenure. The area enclosed is 2,739 acres, and unenclosed 2,851 acres; and there are only 62 acres in cultivation. The total area of alienated land and Crown lands occupied is 528,326 acres. Deducting the area cultivated—46,053 acres—it will be seen that the area used for grazing, dairying and other purposes is 482,273 acres.

The total area of the district is 1,070,989 acres. The figures regarding alienation given above do not include holdings under 1 acre, and as this division includes the metropolitan district, an addition of rather more than 200,000 acres must be made to the alienated area on this account, thus bringing the occupied area up to 730,000 acres.

HUNTER AND MANNING.

From the County of Cumberland settlement advanced westward, and after the alluvial lands of the Hawkesbury and Nepean valleys had been occupied and covered with prosperous farms, the lower portion of the valley of the river Hunter, abounding with natural resources, mineral as well as agricultural, soon attracted settlers, and at the present time more population is concentrated in this district than in any other part of New South Wales outside the metropolitan area. Settlement gradually extended to the whole of the watershed of the Hunter and Manning Rivers, and for the purposes of this chapter, the results relating to the counties comprised within that area are presented in conjunction. The following table shows the actual state of rural settlement therein :—

Counties.	Occupiers of—							Area Alienated.		
	Freehold.	Private Rented.	Partly Freehold and partly Private Rented.	Freehold with Crown lands attached.	Private Rented with Crown lands attached.	Partly Freehold, partly Private Rented, and partly Crown lands.	Total.	Freehold.	Private Rented.	Total.
	No.	No.	No.	No.	No.	No.	No.	acres.	acres.	acres.
Macquarie	1,089	569	146	225	15	33	2,077	301,564	118,545	420,109
Gloucester	911	279	109	308	10	32	1,649	655,297	110,893	766,190
Northumberland	2,289	1,252	259	50	8	13	3,871	385,739	209,474	595,213
Hawes	3	..	..	111	2	2	118	128,566	867	129,433
Durham	775	651	185	223	4	31	1,869	708,707	202,792	911,499
Hunter	143	55	22	53	6	14	293	99,661	40,213	139,874
Brisbane	470	122	64	202	4	38	900	837,705	95,933	933,638
Total	5,680	2,928	785	1,172	49	163	10,777	3,117,239	778,717	3,895,956

This division contains a total area of 10,390,920 acres, of which 3,895,956 acres, or 37·49 per cent. are alienated among 10,777 landholders, so that the average area of holdings in this part of the State is 362 acres. Of the area thus alienated, 3,117,239 acres, or 80·01 per cent., are in the occupancy of the owners of the land; and 778,717 acres, or 19·99 per cent., are occupied by private tenants. The proportion of land held by freeholders is considerable, ranging from 99·32 per cent. in Hawes to 64·81 per cent. in Northumberland. It will be seen on reference to the table that the proportion of land held by tenant occupiers is small compared with the total alienated area, only 19·99 per cent. being leasehold.

The total number of occupiers is estimated at 10,777 for the whole district. Of these, 5,680 occupy their own freeholds; 2,928 are private tenants; 785 rent various private areas in addition to their own land; 1,172 occupy, together with their freeholds, a certain area of Crown lands on lease; 49 occupy holdings, a portion of which consists of private rented lands, and the other portion of Crown land; and 163 stand in the position of being the possessors of freehold, with both private rented lands and Crown lands attached. As before stated, the average area of the holdings in this district is 362 acres, with a minimum of 154 acres in the County of Northumberland, and a maximum of 1,097 acres in that of Hawes, while Brisbane has 1,037 acres; Hunter, 477 acres; Gloucester, 464 acres; and Durham, 488 acres per holding. The area of alienated land enclosed is 3,407,989 acres, and unenclosed 487,967 acres. There are 103,039 acres in cultivation—65,205 acres of land occupied by the owners, and 37,834 acres of private rented land. The classification of the holdings in this division will be found in the following table. The average area of the large estates in the last series is 27,959 acres :—

Size of Holdings.	Alienated Holdings.	Area of Holdings.		Area under Cultivation.	
		Total.	Proportion to Total Area alienated in District.	Total.	Proportion to Area of Holdings.
	No.	acres.	per cent.	acres.	per cent.
1 to 30 acres	3,044	28,631	0·74	8,751	30·56
31 to 400 acres	6,320	835,517	21·44	68,926	8·25
401 to 1,000 acres	839	527,860	13·55	11,525	2·18
1,001 to 10,000 acres	534	1,385,563	35·56	10,815	0·73
10,001 acres and upwards	40	1,118,385	28·71	3,022	0·27
Total	10,777	3,895,956	100·00	103,039	2·64

The area of Crown lands occupied in this division is 1,908,396 acres, held by 1,421 lessees, 1,384 of whom have also alienated land. Of this area, 574,604 acres are held under conditional lease, 73,668 acres under settlement lease, and 1,260,124 acres under other forms of lease. The area enclosed is 929,942 acres; and unenclosed, 978,454 acres. The area of Crown lands cultivated is only 472 acres.

The area of alienated land in holdings over 1 acre in extent, and of Crown lands in occupation, is 5,804,352 acres; and, deducting from this the area cultivated—103,511 acres— there remains an area of 5,700,841 acres used for grazing and dairying.

SOUTH COAST DISTRICT.

In the earlier portion of last century settlement took a southerly direction from the metropolis, and extended rapidly along the lower valleys of the rivers of the South Coast, where the best lands were alienated in grants of large areas to a few families. Later on, however, the nature of the country and a more intelligent apprehension of the principles which should guide settlement brought about the subdivision of these large estates into numerous and comparatively small holdings, which are at present cultivated by a fairly prosperous tenantry. This is especially the case in the county of Camden. The average area of estates in Auckland and Dampier, owing to their distance from the metropolis, and perhaps also to the mountainous character of a considerable portion of the land within their boundaries, reaches 361 and 318 acres, respectively; but as the metropolis is approached, the average area of the holdings decreases to 258 acres in St. Vincent and 170 acres in Camden, the average for the whole district being 229 acres per holding.

In the South Coast district alienated rural lands are occupied in the manner illustrated in the following table:—

Counties.	Occupiers of—							Area Alienated.		
	Freehold.	Private Rented.	Partly Freehold and partly Private Rented.	Freehold with Crown lands attached.	Private Rented with Crown lands attached.	Partly Freehold, partly Private Rented, and partly Crown lands.	Total.	Freehold.	Private Rented.	Total.
	No.	No.	No.	No.	No.	No.	No.	acres.	acres.	acres.
Camden	2,006	1,361	479	56	13	16	3,931	399,153	269,397	668,550
St. Vincent	735	289	171	199	17	51	1,462	270,557	106,725	377,282
Dampier	323	118	78	107	7	16	649	164,062	42,301	206,363
Auckland	535	213	109	139	9	28	1,033	287,155	85,819	372,974
Total	3,599	1,981	837	501	46	111	7,075	1,120,927	504,242	1,625,169

The area of alienated land is shown to be 1,625,169 acres, or 29·63 per cent. of the division—5,484,122 acres; the extent of land occupied by the proprietors themselves being 1,120,927 acres, or 68·97 per cent.; and of that leased to tenant occupiers, 504,242 acres, or 31·03 per cent., of the area alienated. There are altogether in these counties 3,599 occupiers of their own freeholds, 1,981 tenants of private rented land, 837 persons occupying both their own and leased private lands, 501 occupiers of freehold with Crown lands attached, 46 persons occupying private rented lands with Crown lands attached, and 111 persons whose holdings are partly their own, partly leased from private owners, and partly belonging to the Crown—a total of 7,075 occupiers. The area of alienated land enclosed is 1,523,918 acres, leaving 101,251 acres unenclosed. The area in cultivation is 50,054 acres, of which 32,370 acres represent land occupied by the owners, and 17,684 acres land held under private tenancy.

The holdings in this division may be classified as shown in the following table. The average area of large estates over 10,000 acres in extent is 15,027 acres:—

Size of Holdings.	Alienated Holdings.	Area of Holdings.		Area in Cultivation.	
		Total.	Proportion to Total Area alienated in District.	Total.	Proportion to Area of Holdings.
	No.	acres.	per cent.	acres.	per cent.
1 to 30 acres	2,220	16,190	0·99	1,902	11·75
31 to 400 acres	3,902	599,192	36·87	31,046	5·18
401 to 1,000 acres	716	436,020	26·83	11,064	2·54
1,001 to 10,000 acres	231	483,607	29·76	4,260	0·88
10,001 acres and upwards	6	90,160	5·55	1,782	1·97
Total	7,075	1,625,169	100·00	50,054	3·08

The area of Crown lands occupied is 808,872 acres, 107,020 acres being held under conditional lease, 13,816 acres under settlement lease, and 688,036 acres under other forms of lease. The area enclosed is 284,279 acres; and unenclosed, 524,593 acres. The cultivated area is 955 acres—nearly all in the counties of Camden and Auckland. The total number of lessees is 806, of whom 148 occupy Crown lands only.

The area of alienated land and Crown lands occupied is 2,434,041 acres, and, deducting the 51,009 acres cultivated, there are 2,383,032 acres used for grazing, dairying, and other purposes.

NORTH COAST DISTRICT.

In the North Coast district the occupation of the country has extended rapidly of late years along the banks of the fine rivers which empty into the Pacific Ocean. Figures regarding alienated holdings in this district will be found below:—

Counties.	Occupiers of—							Area Alienated.		
	Freehold.	Private Rented.	Partly Freehold and partly Private Rented.	Freehold with Crown lands attached.	Private Rented with Crown lands attached.	Partly Freehold, partly Private Rented, and partly Crown lands.	Total.	Freehold.	Private Rented.	Total.
	No.	No.	No.	No.	No.	No.	No.	acres.	acres.	acres.
Rous	2,207	1,119	182	163	10	15	3,696	577,491	155,437	732,928
Richmond	324	198	49	102	3	6	682	178,486	42,348	220,834
Clarence	886	545	163	155	35	39	1,823	190,192	64,732	254,924
Fitzroy	370	62	11	152	5	3	603	138,404	9,841	148,245
Raleigh	516	171	38	141	6	7	879	90,332	23,408	113,740
Dudley	274	246	80	80	10	9	699	110,932	40,030	150,962
Total	4,577	2,341	523	793	69	79	8,382	1,285,837	335,796	1,621,633

Of all the districts of New South Wales, the North Coast counties exhibit the best and most satisfactory results as regards settlement. Nowhere has the great object of the Act of 1861—to place an industrious farming population on the soil—been better fulfilled. The total number of land-holders is 8,382, of whom only 2,341 are private tenants, and 69 rent Crown lands in addition to lands owned by private persons; while

4,577 occupy their own freeholds, 523 work both their own land and additional areas rented from private owners, 793 occupy areas of Crown lands together with their freeholds, and 79 add to their own lands areas leased from private persons, and also from the State. The total area alienated in this rich part of the State amounts to 1,621,633 acres, or only 29·98 per cent. of the total extent of the division, which covers 5,409,370 acres; and the average area of holdings is 193 acres, ranging from 129 acres in Raleigh to 324 acres in Richmond. The proportion of leasehold lands to the area alienated is comparatively small, there being only 335,796 acres so held, or 20·71 per cent. of the total alienated area, whilst 1,285,837 acres, or 79·29 per cent., are in the occupancy of the owners of the land themselves. In the counties of Rous and Fitzroy the area leased by private persons forms only 21·21 and 6·64 per cent., respectively, of the area alienated; and the maximum is reached in Dudley, where 26·51 per cent. of the settled rural land is occupied by tenants. The area enclosed is 1,385,862 acres, or about 85·46 per cent. of the total; and the area unenclosed is about 235,771 acres. The extent of land in cultivation is 108,203 acres, of which 68,501 acres are cultivated by the owners, and 39,702 acres by private tenants.

The holdings in this division may be classified as under. The average area of large estates over 10,000 acres in extent is 22,473 acres:—

Size of Holdings.	Alienated Holdings.	Area of Holdings.		Area in Cultivation.	
		Total.	Proportion to Total Area alienated in District.	Total.	Proportion to Area of Holdings.
	No.	acres.	per cent.	acres.	per cent.
1 to 30 acres	1,536	12,170	0·75	4,549	37·38
31 to 400 acres	6,150	869,337	53·61	88,803	10·21
401 to 1,000 acres	547	324,961	20·04	11,472	3·53
1,001 to 10,000 acres	144	302,800	18·67	3,251	1·07
10,001 acres and upwards	5	112,365	6·93	128	0·11
Total	8,382	1,621,633	100·00	108,203	6·67

The area of Crown lands occupied is 2,611,854 acres, held by lessees to the number of 1,074, of whom 941 occupy Crown lands in conjunction with alienated holdings, and 133 occupy Crown lands only. The area under conditional lease is 207,607 acres; under settlement lease, 3,175 acres; and under all other forms of lease, 2,401,072 acres. The extent of Crown lands enclosed is 598,432 acres, and unenclosed 2,013,422 acres. The area cultivated is 1,501 acres.

The area of alienated lands and Crown lands occupied is 4,233,487 acres, and deducting from this the area cultivated—109,704 acres—there remains an area of 4,123,783 acres used for grazing, dairying, and other purposes.

From the foregoing a fairly clear idea may be obtained of the present state of rural settlement in the valleys of the northern coastal rivers, and in the country extending from the sea to the first slopes of the Great Dividing Range. Geographical features and climate are the main elements in determining the occupation of the soil, irrespective of administrative boundaries. In this part of the State the settlement of the public lands has proceeded in a way very different from that of the tableland, which extends from north to south, and divides the rich agricultural valleys of the coastal rivers and their broken mountainous watershed from the immense plains of the western district.

NORTHERN TABLELAND.

In the northern tableland the disproportion between freeholders and tenants is strongly marked, the latter forming a very small minority of the occupiers of alienated lands, owing to the same causes which operate both in the south and in the centre of this great section of the State. It is evident that the object of the Land Act of 1861 to create a class of independent settlers has been fairly successful, notwithstanding the fact that the number of actual occupiers is small compared with that of the individual selectors who, since the year 1861, have applied for conditional purchases. The following figures illustrate the state of settlement in the part of the country in question:—

Counties.	Occupiers of—							Area Alienated.		
	Freehold.	Private Rented.	Partly Freehold and partly Private Rented.	Freehold with Crown Lands attached.	Private Rented with Crown Lands attached.	Partly Freehold, partly Private Rented, and partly Crown Lands.	Total.	Freehold.	Private Rented.	Total.
	No.	No.	No.	No.	No.	No.	No.	acres.	acres.	acres.
Buller	51	5	1	106	4	2	169	70,544	2,789	73,333
Clive	268	32	41	238	3	10	592	167,999	6,790	174,789
Gough	544	208	61	322	2	4	1,141	517,616	28,630	546,246
Drake	14	9	2	21	2	..	48	128,546	4,084	132,630
Gresham	11	..	1	10	..	1	23	18,785	907	19,692
Clarke	51	12	1	198	4	3	269	177,648	16,158	193,806
Hardinge	130	29	13	281	1	6	460	307,471	10,208	317,679
Sandon	609	174	55	139	2	9	988	520,704	20,273	540,977
Vernon	133	29	6	163	3	8	342	351,971	9,291	361,262
Total	1,811	498	181	1,478	21	43	4,032	2,261,284	99,130	2,360,414

The total area alienated in this division is 2,360,414 acres, or 26·44 per cent. of the whole extent of 8,928,487 acres. The total number of occupiers of rural settled lands is 4,032, of whom 1,811 live on their freeholds; 498 are tenants of private lands; 181 rent private lands in addition to possessing freehold land; 1,478 occupy Crown lands in addition to their freeholds; 21 occupy private rented lands with Crown lands attached; and 43 persons who possess freeholds are also tenants of the Crown and of private landowners. The proportion of the area occupied by private tenants is 99,130 acres, or 4·20 per cent. of the whole extent of alienated land; whilst 95·80 per cent., representing 2,261,284 acres, is occupied by the landowners themselves. The land is used both for agricultural and pastoral purposes, and these industries are generally carried on conjointly. The average area of holdings in the division is 585 acres, ranging from 2,763 acres per holding in Drake to 295 acres in Clive. The average in the counties of Gresham, Clarke, Hardinge, Sandon, and Vernon is 856 acres, 720 acres, 689 acres, 548 acres, and 1,056 acres, respectively. The area of alienated land enclosed is 2,311,457 acres, and unenclosed 48,957 acres. There are 67,224 acres cultivated—that is, about 2·9 per cent. of the alienated area—53,014 acres being land tilled by the proprietors, and 14,210 acres by tenants. The holdings in this division may be classified as follows:—

Size of Holdings.	Alienated Holdings.	Area of Holdings.		Area in Cultivation.	
		Total.	Proportion to Total Area alienated in District.	Total.	Proportion to Area of Holdings.
	No.	acres.	per cent.	acres.	per cent.
1 to 30 acres	991	6,087	0·26	1,339	21·99
31 to 400 acres	2,220	367,572	15·57	40,645	11·06
401 to 1,000 acres	489	310,604	13·16	13,775	4·43
1,001 to 10,000 acres	281	716,278	30·34	8,755	1·22
10,001 acres and upwards	51	959,873	40·67	2,710	0·28
Total	4,032	2,360,414	100·00	67,224	2·85

The average area of the large estates over 10,000 acres in extent, on the northern tableland is 18,821 acres.

There are 5,131,166 acres of Crown lands occupied in this division, 1,156,003 acres of which are held under conditional lease, 171,784 acres under settlement lease, and 3,803,379 acres under other forms of lease. The area of Crown lands enclosed is 2,776,207 acres, and unenclosed 2,354,959 acres. The total number of lessees is 1,738, of whom 196 occupy Crown lands only. Only a very small area, 1,138 acres, is under cultivation.

The total area of alienated lands and Crown lands held under lease is 7,491,580 acres, and deducting from this the area cultivated—68,362 acres—it will be seen that the area devoted to grazing and dairying is 7,423,218 acres.

CENTRAL TABLELAND.

After the difficulties blocking extension from the coast to the interior had been overcome, the pioneers of settlement penetrated to the central tableland, thence to the south and the north, and afterwards gradually spread over the whole of the Great Western interior. At first they followed the courses of the great rivers, and occupied, little by little, all the available land, until at the present time only a small proportion of country remains untenanted.

The central tableland, comprising the counties grouped around the cities of Bathurst, Orange, and Mudgee, was the first settled, and the occupation of the alienated lands at the present time is illustrated by the figures given in the following table:—

Counties.	Occupiers of—							Area Alienated.		
	Freehold.	Private Rented.	Partly Freehold and partly Private Rented.	Freehold with Crown lands attached.	Private Rented with Crown lands attached.	Partly Freehold, partly Private Rented, and partly Crown lands.	Total.	Freehold.	Private Rented.	Total.
	No.	No.	No.	No.	No.	No.	No.	acres.	acres.	acres.
Bligh	161	26	15	267	6	18	493	548,970	49,038	598,008
Phillip	370	109	37	233	17	31	797	313,756	42,279	356,035
Wellington	566	219	109	317	11	16	1,238	460,767	47,333	508,100
Roxburgh	398	148	52	215	7	30	850	239,644	72,811	312,455
Cook	1,308	219	111	39	3	14	1,694	152,278	44,939	197,217
Westmoreland	244	75	45	222	15	27	628	192,908	61,900	254,808
Georgiana	196	67	34	369	15	45	726	325,744	53,326	379,070
Bathurst	937	492	167	176	16	35	1,823	683,716	153,815	837,531
Total	4,180	1,355	570	1,838	90	216	3,249	2,917,783	525,441	3,443,224

From the foregoing table it will be seen that the number of holders of rural lands in this part of the State is 8,249, of whom 4,180 occupy their own freeholds; 1,355 are private tenants; 570 lease lands from private owners in addition to their own freeholds; 1,838 persons occupy areas of Crown lands, generally for grazing purposes, in addition to their own freeholds; 90 rent both private and Crown lands; and 216 are tenants both of private parties and the Crown, as well as possessing land of their own. The alienated area is 3,443,224 acres, representing 38·30 per cent. of the whole area of the division, which is computed at 8,989,259 acres. The proportion of land occupied by the landowners themselves is 84·74 per cent., or 2,917,783 acres; whilst 525,441 acres are leased to tenant occupiers. In the county of Westmoreland the proportion of land leased is considerable, 61,900 acres out of 254,808 acres alienated in this county, or 24·29 per cent., being held by tenants; and in Roxburgh and Cook, 72,811 acres and 44,939 acres respectively, or 23·30 and 22·79 per cent., are held in the same manner. The proportion in the remaining counties gradually diminishes, from 18·37 per cent. in Bathurst and 14·07 per cent. in Georgiana to 11·87 per cent. in Phillip, 9·32 per cent. in Wellington, and 8·20 per cent. in Bligh. On the Central tableland are situated some of the finest freehold estates in New South Wales, the land having remained in the hands of the original grantees or their descendants, who consolidated their holdings by taking advantage of the auction sale and improvement clauses of the Land Act of 1861.

The average area of holdings in this division is 417 acres, ranging from a maximum of 1,213 acres in Bligh to a minimum of 116 acres in Cook. The total area of alienated land enclosed is 3,384,137 acres, or 98·28 per cent., the area unenclosed being only 59,087 acres. The area cultivated is 218,646 acres—168,909 acres being land worked by the owners, and 49,737 acres by tenants.

The holdings in this division may be classified as under. The average area of large estates over 10,000 acres in extent is 24,164 acres:—

Size of Holdings.	Alienated Holdings.	Area of Holdings.		Area in Cultivation.	
		Total.	Proportion to Total Area alienated in District.	Total.	Proportion to Area of Holdings.
	No.	acres.	per cent.	acres.	per cent.
1 to 30 acres	2,328	18,850	0·55	5,469	29·01
31 to 400 acres	4,505	659,730	19·16	102,011	15·46
401 to 1,000 acres	875	553,563	16·08	50,066	9·04
1,001 to 10,000 acres	501	1,244,528	36·14	44,798	3·60
10,001 acres and upwards	40	966,553	28·07	16,302	1·69
Total	8,249	3,443,224	100·00	218,646	6·35

The area of Crown lands occupied on the Central tableland is 2,812,428 acres, of which 897,548 acres are held under conditional lease, 72,698 acres under settlement lease, and 1,842,182 acres under other forms of lease. There are 2,500,793 acres enclosed, and 311,635 acres unenclosed. The number of lessees is 2,474, of whom 2,144 occupy Crown lands in addition to alienated holdings, and 330 occupy Crown lands only. The area cultivated is 4,069 acres.

The area of alienated land and Crown lands occupied is 6,255,652 acres; and deducting from this the area in cultivation—222,715 acres—there remain 6,032,937 acres used for grazing, dairying, and other purposes.

SOUTHERN TABLELAND.

The conditions of settlement in the Southern tableland do not greatly differ from those which obtain in the Central district, the principal feature being the greater proportion of holdings occupied by their proprietors. The following table illustrates the state of settlement in the various counties which comprise this portion of the state:—

Counties.	Occupiers of—							Area Alienated.		
	Freehold.	Private Rented.	Partly Freehold and partly Private Rented.	Freehold with Crown Lands attached.	Private Rented, with Crown Lands attached.	Partly Freehold, partly Private Rented, and partly Crown Lands.	Total.	Freehold.	Private Rented.	Total.
	No.	No.	No.	No.	No.	No.	No.	acres.	acres.	acres.
King	486	160	64	339	19	33	1,101	566,741	73,101	639,842
Argyle	624	260	135	211	19	70	1,319	541,343	184,598	725,[illegible]
Murray	408	155	99	224	5	54	945	744,954	117,622	862,576
Beresford	188	46	18	212	4	18	486	359,639	10,501	370,140
Cowley	18	8	2	84	2	9	123	108,500	17,739	126,239
Wallace	155	23	8	268	5	15	474	424,901	21,825	446,726
Wellesley	288	82	44	143	12	21	590	568,778	24,326	593,104
Total	2,167	734	370	1,481	66	220	5,038	3,314,856	449,707	3,764,563

Thus the land alienated in this part of the State comprises 3,764,563 acres, or 47·57 per cent. of the whole of its area, which contains 7,913,500 acres. Of this extent of land, only 449,707 acres, or 11·95 per cent. of the settled lands, are held in tenancy, whilst 3,314,856 acres, or 88·05 per cent., are occupied by the landowners themselves. The percentage of land held in tenancy is greatest in the counties of Argyle and Cowley, where it is 25·43 and 14·05 respectively. There are 11·42 per cent. in King, 13·63 in Murray, 4·89 in Wallace, 4·10 in Wellesley, and 2·84 per cent. in Beresford.

In this division the total number of occupiers is 5,038, of whom 2,167 occupy their own freeholds; 734 are private tenants; 370 occupy both descriptions of alienated lands; 1,481 occupy areas of Crown lands in addition to their freehold; 66 occupy private rented lands with Crown lands attached; and 220 persons who possess freeholds also rent land from private owners and from the Crown. The conditions of settlement in which pastoral occupation is the leading feature must necessarily greatly affect the average extent of rural holdings, and in this division it will be found to attain fairly high proportions, 747 acres being the average throughout, with a maximum of 1,026 acres in Cowley, and a minimum of 550 acres in Argyle. The area of alienated land enclosed is 3,751,598 acres, and unenclosed 12,965 acres. The total extent in cultivation is

55,015 acres, viz., 45,649 acres worked by owners, and 9,366 acres by tenants; this is small in proportion to the area of the division. The average area of large estates over 10,000 acres in extent is 19,490 acres. The holdings in this division may be classified as shown in the following table:—

Size of Holdings.	Alienated Holdings.	Area of Holdings.		Area in Cultivation.	
		Total.	Proportion to Total Area alienated in District.	Total.	Proportion to Area of Holdings.
	No.	acres.	per cent.	acres.	per cent.
1 to 30 acres	1,039	7,147	0·19	1,394	19·50
31 to 400 acres	2,556	400,935	10·65	21,870	5·45
401 to 1,000 acres	775	497,482	13·21	13,155	2·64
1,001 to 10,000 acres	606	1,650,699	43·85	14,379	0·87
10,001 acres and upwards	62	1,208,300	32·10	4,217	0·35
Total	5,038	3,764,563	100·00	55,015	1·46

The area of Crown lands occupied in the counties of the Southern tableland is 2,786,862 acres, of which there are under conditional lease 836,891 acres, 5,229 acres under settlement lease, and 1,944,742 acres under other forms of lease. The area enclosed is 1,889,045 acres, and unenclosed 897,817 acres. The total number of lessees is 1,887, of whom 1,767 hold alienated lands also, and 120 occupy Crown lands only. The area cultivated on Crown lands is very small, being only 321 acres.

The area of alienated land and Crown land occupied is 6,551,425 acres, and deducting the area cultivated—55,336 acres—there remain 6,496,089 acres devoted to grazing and dairying.

North-western Slope.

The districts situated on the Western slope of the Great Dividing Range mark the transition between the agricultural settlements of the west and tableland, and the purely pastoral settlements of the Great Western plains. The extent of arable land in the divisions comprised in the Western slopes is very considerable, but in proportion to the total area of holdings little is devoted to cultivation, as it is more advantageous at present to use the land for grazing purposes, distance from the markets being the principal obstacle to a rapid extension of agriculture. Notwithstanding this, however, a considerable impetus has been given to agriculture during the last ten years.

It will be noticed that the proportion of land alienated considerably diminishes as the districts on the Western slope are reached, except in those parts where the excellence of the land for grazing purposes, and even for agriculture, impelled the pastoral tenants of the Crown some years ago to secure their holdings from the incursions of the free selector—whom the Act ostensibly intended to favour—by means of systematic purchases under the auction sale and improvement clauses of the Land Act of 1861. In the North-western districts the freehold estates are neither so numerous nor of such an enormous extent as those in the south. The state of settlement in the counties situated in the North-western slope may be gathered from the following table:—

Counties.	Occupiers of—							Area Alienated.		
	Freehold.	Private Rented.	Partly Freehold and partly Private Rented.	Freehold with Crown Lands attached.	Private Rented with Crown Lands attached.	Partly Freehold, partly Private Rented, and partly Crown Lands.	Total.	Freehold.	Private Rented.	Total.
	No.	No.	No.	No.	No.	No.	No.	acres.	acres.	acres.
Arrawatta	132	23	6	170	1	2	334	309,865	9,239	319,104
Darling	181	69	14	194	2	12	472	361,039	30,654	391,693
Inglis	173	52	15	156	1	9	406	191,649	16,468	208,117
Parry	266	91	20	147	2	8	534	524,581	18,295	542,876
Buckland	345	62	30	86	2	7	532	715,275	16,152	731,427
Burnett	112	11	1	128	1	3	256	395,525	3,659	399,184
Murchison	212	29	13	160	3	5	422	279,737	11,837	291,574
Nandewar	163	21	3	100	4	1	292	298,672	8,577	307,249
Pottinger	403	34	14	155	8	8	622	1,062,905	15,413	1,078,318
Total	1,987	392	116	1,296	24	55	3,870	4,139,198	130,294	4,269,492

The area alienated is 4,269,492 acres, or 43·51 per cent. of the total area, which is 9,813,555 acres. The highest proportion of alienated land is in Pottinger, around Gunnedah, where 1,078,318 acres, or 59·95 per cent. of the total area of the county, calculated at 1,798,746 acres, have been alienated, the greater portion to the pastoralists, who have succeeded in preventing the settlement of an agricultural class on the best portion of the famed Liverpool Plains. The competition between the pastoralists and the selectors was not so keen in the North-western district as it was in the Central, and more particularly in the South-western and Riverina divisions, presumably because the land, though equally good in quality, is too distant from the markets, and the country is more exposed to extreme climatic influences in the northern parts. The average area of holdings throughout the district, though higher than in the Central-western and South-western divisions, is not so large as the average in the Riverina district, reaching 1,103 acres, with a maximum of 1,734 acres in Pottinger, owing to causes explained above, and a minimum of 513 acres in Inglis. The district, with the exception of its eastern portion, abutting on the boundary of the tableland of New England, is entirely devoted to the depasturing of stock. There are 587 tenant occupiers, renting 130,294 acres, the balance of the alienated area—4,139,198 acres—being occupied by 3,283 proprietors. The total number of holdings is 3,870, of which 1,987 are freehold, 392 private rented properties, 116 partly freehold and partly private-rented lands, 1,296 freeholds to which have been added Crown lands, 24 private-rented lands with Crown lands attached, and 55 partly freehold and partly private rented and Crown lands.

The proportion of land held by tenant occupiers is not large, amounting only to 3·05 per cent. for the division. In Darling it reaches 7·83 per cent., and in Inglis 7·91 per cent., but the proportion is very small everywhere else. The greater part of the alienated land in this division is enclosed, only 100,924 acres out of a total of 4,269,492 acres remaining open. The area cultivated is 253,384 acres, 225,861 acres being tilled by proprietors and 27,523 acres by tenants.

The holdings in this division may be classified as follows. The average area of large estates over 10,000 acres in extent is 35,440 acres:—

Size of Holdings.	Alienated Holdings.	Area of Holdings.		Area in Cultivation.	
		Total.	Proportion to Total Area alienated in District.	Total.	Proportion to Area of Holdings
	No.	acres.	per cent.	acres.	per cent.
1 to 30 acres	718	5,223	0·12	1,811	34·67
31 to 400 acres	1,903	355,702	8·33	86,857	24·42
401 to 1,000 acres	729	460,205	10·78	68,458	14·88
1,001 to 10,000 acres	454	1,109,329	25·98	72,830	6·57
10,001 acres and upwards	66	2,339,033	54·79	23,428	1·00
Total	3,870	4,269,492	100·00	253,384	5·90

In the North-western slope there are under lease 3,832,000 acres of Crown lands, 3,405,408 acres being enclosed, and 426,592 acres unenclosed. The total area under conditional lease is 1,450,073 acres; under settlement lease, 523,481 acres; and 1,858,446 acres under other forms of lease. There is no cultivation to speak of, the entire area under crop being only 11,833 acres. There are 1,669 lessees, 1,375 occupying Crown lands in addition to their alienated holdings, and 294 occupying Crown lands only.

The area of alienated lands and Crown lands occupied is 8,101,492 acres, and, deducting the area cultivated, 265,217 acres, there remain 7,836,275 acres, devoted to the pastoral and dairying industries—chiefly, of course, to the former.

Central-western Slope.

The condition of settlement in regard to the lands on the Central-western slope is illustrated by the following table:—

Counties.	Occupiers of—							Area Alienated.		
	Freehold.	Private Rented.	Partly Freehold and partly Private Rented.	Freehold with Crown Lands attached.	Private Rented with Crown Lands attached.	Partly Freehold, partly Private Rented, and partly Crown Lands.	Total.	Freehold.	Private Rented.	Total.
	No.	No.	No.	No.	No.	No.	No.	acres.	acres.	acres.
Napier	41	12	3	33	1	1	91	185,201	8,283	193,484
Gowen	110	38	7	176	2	8	341	240,662	25,142	265,804
Lincoln	280	78	19	271	3	7	658	312,544	19,863	332,407
Gordon	196	58	15	162	2	11	444	334,104	22,835	356,939
Ashburnham	1,052	194	65	333	12	16	1,672	734,299	52,472	786,771
Forbes	307	42	15	122	5	6	497	461,243	19,640	480,883
Total	1,986	422	124	1,097	25	49	3,703	2,268,053	148,235	2,416,288

The total area alienated amounts to 2,416,288 acres, or 38·64 per cent. of the total area of the division, which is estimated at 6,252,567 acres. The greatest area alienated is in the county of Ashburnham, where there are 786,771 acres, or 56·53 per cent. of the total area, held by settlers. The percentage of alienated land in Forbes is 52·59; in Gordon, 38·33; in Lincoln, 27·31; in Gowen, 23·23; and in Napier, 29·60. The land is almost entirely devoted to pastoral pursuits, there being only 375,784 acres under cultivation, of which 364,495 acres, or 97·00 per cent., are in the counties of Lincoln, Gordon, Ashburnham, and Forbes. Only 27,709 acres are cultivated by tenants. Although the area occupied by tenants is proportionately about the same as in the area farther south, there are only

148,235 acres so held, the proprietors occupying 2,268,053 acres out of the 2,416,288 acres of alienated land which the division contains. The proportion held by tenants ranges from 9·46 per cent. in Gowen to 4·28 and 4·08 per cent. in Napier and Forbes; the average for the whole district is 6·13 per cent. The area of alienated land enclosed is 2,401,464 acres, and only 14,824 acres are unenclosed. The average area of holdings in the division is 653 acres, ranging from 470 acres in Ashburnham to 2,126 acres in Napier.

The holdings in this division may be classified as shown on the following table. The average area of large estates over 10,000 acres in extent is 18,908 acres:—

Size of Holdings.	Alienated Holdings.	Area of Holdings.		Area in Cultivation.	
		Total.	Proportion to Total Area alienated in District.	Total.	Proportion to Area of Holdings.
	No.	acres.	per cent.	acres.	per cent.
1 to 30 acres	821	6,296	0·26	1,875	29·78
31 to 400 acres	1,659	300,094	12·42	106,311	35·43
401 to 1,000 acres	762	482,819	19·98	126,607	26·22
1,001 to 10,000 acres	425	946,386	39·17	114,850	12·14
10,001 acres and upwards	36	680,693	28·17	26,141	3·84
Total	3,703	2,416,288	100·00	375,784	15·55

The area of Crown lands occupied in this division is 2,607,812 acres, of which 2,474,588 acres are enclosed. The area under conditional lease is 1,133,105 acres; under settlement lease, 418,793 acres; and under other forms of lease, 1,055,914 acres. The area under cultivation is only 36,794 acres. There are 1,405 lessees, of whom 1,171 also have alienated estates, and 234 occupy Crown lands only.

The total area of alienated lands and Crown lands occupied is 5,024,100 acres, of which 4,611,522 acres are devoted to the pastoral and dairying industries.

SOUTH-WESTERN SLOPE.

In the South-western slope which is traversed by the principal permanent rivers of western New South Wales, the land has been alienated in a wholesale fashion, and immense areas of freehold land are in the hands of a comparatively small number of landholders. The state of settlement in the counties situated on the southern part of the Western slope of the Great Dividing Range may be gathered from the following table:—

Counties.	Occupiers of—							Area Alienated.		
	Freehold.	Private Rented.	Partly Freehold and partly Private Rented.	Freehold with Crown Lands attached.	Private Rented with Crown Lands attached.	Partly Freehold, partly Private Rented, and partly Crown Lands.	Total.	Freehold.	Private Rented.	Total.
	No.	No.	No.	No	No	No.	No.	acres.	acres.	acres.
Monteagle	716	58	28	87	3	8	900	542,538	29,751	572,289
Harden	612	141	69	129	1	7	959	856,027	50,535	906,562
Buccleuch	131	72	7	115	6	6	337	200,244	18,494	218,738
Selwyn	131	16	9	89	1	3	249	226,440	4,151	230,591
Bland	498	34	5	238	5	8	788	816,167	65,495	881,662
Clarendon	412	116	40	39	2	6	615	625,185	44,320	669,505
Wynyard	628	203	62	165	12	24	1,094	589,889	65,368	655,257
Goulburn	477	116	40	75	1	12	721	579,150	65,256	644,406
Total	3,605	756	260	937	31	74	5,663	4,435,640	343,870	4,779,010

The total area of this division is computed at 8,185,759 acres, of which 4,779,010 acres are alienated, or 58·38 per cent. of the whole area. In some of the counties, however, a greater proportion of the land has been parted with; thus, in Clarendon, 87·20 per cent. is alienated, or 669,505 acres out of a total of 767,795 acres. This is followed by Harden with 84·31 per cent., or 906,562 acres out of 1,075,309 acres; Goulburn with 74·74 per cent., or 644,406 acres out of 862,249 acres; Monteagle with 68·86 per cent., or 572,289 acres out of 831,078 acres; Wynyard with 59·35 per cent., or 655,257 acres out of 1,104,022 acres; Bland with 56·85 per cent., or 881,662 acres out of 1,550,732 acres; Buccleuch with 24·95 per cent., or 218,738 acres out of 876,585 acres; and Selwyn with 20·63 per cent., or 230,591 acres out of 1,117,989 acres. The percentage of land held by tenants is very small, ranging from 1·80 per cent. in Selwyn to 10·13 per cent. in Goulburn, 9·98 per cent. in Wynyard, and 8·45 per cent. in Buccleuch, the percentage for the whole division being only 7·17.

The number of holders of rural lands in this division is 5,663, of whom 3,605 occupy their own freeholds; only 756 are private tenants alone; 260 rent private lands in addition to their freeholds; 937 persons occupy areas of Crown lands, generally for grazing purposes, in addition to their own freeholds; 31 persons occupy private rented lands with Crown lands attached; and 74 persons who possess freeholds also rent land from the Crown and from private owners.

The average area of holdings for the whole division is 844 acres; but in the counties of Bland and Clarendon it reaches 1,119 and 1,089 acres respectively, diminishing from 945 acres in Harden to 599 acres in Wynyard.

Practically the whole of the alienated land in this division is enclosed, only 40,865 acres out of a total area of 4,779,010 acres being open. The area under cultivation is 418,098 acres, of which 369,072 acres represent land worked by proprietors, while 49,026 acres are tilled by tenants. The average area of estates over 10,000 acres in extent is 21,726 acres. The holdings in this division are thus distributed :—

Size of Holdings.	Alienated Holdings.	Area of Holdings.		Area in Cultivation.	
		Total.	Proportion to Total Area alienated in District.	Total.	Proportion to Area of Holdings.
	No.	acres.	per cent.	acres.	per cent.
1 to 30 acres	1,745	13,648	0·29	2,986	21·88
31 to 400 acres	2,304	391,928	8·20	94,652	24·15
401 to 1,000 acres	835	532,277	11·14	105,305	19·78
1,001 to 10,000 acres	689	1,885,844	39·46	153,662	8·15
10,001 acres and upwards	90	1,955,313	40·91	61,493	3·14
Total	5,663	4,779,010	100·00	418,098	8·75

The total area of Crown lands occupied on the South-western slope is 2,272,174 acres, only 369,893 acres of which remain unfenced. The area held under conditional lease is 810,411 acres; under settlement lease, 162,078 acres; and 1,299,685 acres under other forms of lease. In cultivation there are 24,757 acres, of which 22,091 acres are in the county of Bland. The number of lessees is 1,394, of whom 1,042 occupy Crown lands attached to alienated holdings, and 352 occupy Crown lands only.

The area of alienated lands and Crown lands occupied is 7,051,184 acres, and deducting from this the cultivated area, 442,855 acres, the area devoted to grazing and dairying is 6,608,329 acres.

NORTH-WESTERN PLAIN.

This division was formerly included in the North-western slope, but as a more correct delimitation of the divisions of the State has recently been adopted, the particulars relating to it are now shown separately. The occupation of the alienated lands is illustrated by the figures given in the following table:—

Counties.	Holdings.							Area Alienated.		
	Freehold.	Private Rented.	Partly Freehold and partly Private Rented.	Freehold, with Crown Lands attached.	Private Rented, with Crown Lands attached.	Partly Freehold, partly Private Rented, and partly Crown Lands.	Total.	Freehold.	Private Rented.	Total.
	No.	No.	No.	No.	No.	No.	No.	acres.	acres.	acres.
Stapylton	32	3	..	59	..	..	94	286,023	671	286,694
Courallie	78	22	4	84	2	5	195	711,163	16,045	727,208
Jamison	38	3	..	105	1	5	152	471,711	4,319	476,030
White	95	26	5	29	3	2	160	65,751	3,842	69,593
Benarba	27	2	2	98	2	2	133	364,073	3,331	367,404
Denham	5	1	..	44	..	..	50	210,960	7,080	218,040
Baradine	59	13	3	86	1	2	164	162,847	2,501	165,348
Total	334	70	14	505	9	16	948	2,272,528	37,789	2,310,317

The area alienated is 2,310,317 acres, or 23·03 per cent. of the total area of the division, which is 10,030,901 acres. The highest proportion of alienated land is in Courallie, where 57·84 per cent., or 727,208 acres of the total area of the county, calculated at 1,257,172 acres, have been so dealt with. The average area of holdings throughout the division, though higher than in the Central-western plain, is not so large as the average in the Riverina division, reaching 2,437 acres, with a maximum of 4,361 acres in Denham, and a minimum of 435 acres in White. The bulk of the country is almost entirely devoted to the depasturing of stock. There are 109 tenant occupiers, renting 37,789 acres, the balance of the alienated area—2,272,528 acres—being occupied by 839 proprietors. The total number of holdings is 948, of which 334 are freehold, 70 private-rented properties, 14 partly freehold and partly private-rented lands, 505 freeholds to which have been added Crown lands, 9 private-rented lands with Crown lands attached, and 16 partly freehold and partly private rented and Crown lands.

The proportion of land held by tenant occupiers is not large, amounting only to 1·64 per cent. for the division. In White it reaches 5·52 per cent.; but the proportion is very small everywhere else. The greater part of the alienated land in this division is enclosed, only 28,485 acres out of a total of 2,310,317 acres remaining open. The area cultivated is 8,530 acres, 8,183 acres being tilled by proprietors, and 347 acres by tenants.

The holdings in this division may be classified as follows. The average area of large estates over 10,000 acres in extent is 35,728 acres:—

Size of Holdings.	Alienated Holdings.	Area of Holdings.		Area in Cultivation.	
		Total.	Proportion to Total Area Alienated in District.	Total.	Proportion to Area of Holdings.
	No.	acres.	per cent.	acres.	per cent.
1 to 30 acres	200	1,206	0·05	228	18·91
31 to 400 acres	217	36,053	1·56	1,842	5·11
401 to 1,000 acres	241	160,239	6·94	3,367	2·10
1,001 to 10,000 acres	249	647,956	28·05	2,284	0·35
10,001 acres and upwards	41	1,464,863	63·40	809	0·06
Total	948	2,310,317	100·00	8,530	0·37

In the North-western plain there are under lease 4,963,085 acres of Crown lands, of which 4,600,709 acres are enclosed, and 362,376 acres unenclosed. The total area under conditional lease is 1,574,887 acres, under settlement lease, 1,365,811 acres, and under other forms of lease 2,022,387 acres. There is no cultivation worth mentioning, the area under crop being restricted to 1,731 acres. There are 941 lessees, 530 occupying Crown lands in addition to their alienated holdings, and 411 occupying Crown lands only.

The area of alienated and Crown lands occupied is 7,273,402 acres, and, deducting the area cultivated, 10,261 acres, there remain 7,263,141 acres devoted to the pastoral industry.

CENTRAL-WESTERN PLAIN.

The condition of settlement in regard to the lands on the Central-western plain is illustrated by the following table:—

Counties.	Holdings.							Area Alienated.		
	Freehold.	Private Rented.	Partly Freehold and partly Private Rented.	Freehold with Crown Lands attached.	Private Rented with Crown Lands attached.	Partly Freehold, partly Private Rented, and partly Crown Lands.	Total.	Freehold.	Private Rented.	Total.
	No.	No.	No.	No.	No.	No.	No.	acres.	acres.	acres.
Leichhardt	79	15	4	162	4	3	267	694,211	6,717	700,928
Ewenmar	52	16	..	161	4	4	237	446,206	7,403	453,609
Narromine	287	35	4	123	3	4	456	347,091	8,142	355,233
Kennedy	39	2	1	94	2	1	139	199,748	3,397	203,145
Cunningham	138	12	4	154	13	2	323	392,612	14,031	406,643
Gipps	33	6	1	144	5	5	194	591,505	37,666	629,171
Clyde (part of)	5	..	..	22	..	..	27	50,568	....	50,568
Gregory (part of)	27	7	..	86	..	8	128	621,314	10,716	632,030
Oxley	103	17	4	64	..	2	190	277,960	1,548	279,508
Canbelego (part of)	11	..	..	30	..	..	41	37,620	....	37,620
Flinders	12	1	1	40	..	..	54	78,987	427	79,414
Total	786	111	19	1,080	31	29	2,056	3,787,822	90,047	3,827,869

The alienated area amounts to 3,827,869 acres, or 23·88 per cent. of the total area of the division, which is estimated at 16,029,880 acres. The highest proportion of alienated land is in the county of Gipps, where 35·23 per cent., or 629,171 acres of the total area of the county, calculated at 1,786,008 acres, have been alienated. The proportion in Ewenmar is 34·24 per cent.; in Gregory, 33·57 per cent.; in Oxley, 29·98 per cent.; gradually diminishing to 4·57 per cent. in Flinders. The proportion of alienated land held under tenancy in this division is small, being only 2·35 per cent. of the total. The total number of holdings is 2,056, of which 786 are freehold, 111 private-rented properties, 19 partly freehold and partly private-rented lands, 1,080 freeholds to which have been added Crown lands, 31 private-rented lands with Crown lands attached, and 29 partly freehold and partly private rented and Crown lands. The greater portion of the alienated land in this division is enclosed, only 22,056 acres out of a total of 3,827,869 acres remaining open. The area cultivated is 208,315 acres, 201,714 acres being tilled by proprietors, and 6,601 acres by tenants.

The average area of holdings in this division is 1,862 acres, ranging from 779 acres in Narromine to 4,938 acres in Gregory.

The holdings in this division may be thus classified. The average area of large estates over 10,000 acres in extent is 29,267 acres:—

Size of Holdings.	Alienated Holdings.	Area of Holdings.		Area in Cultivation.	
		Total.	Proportion to Total Area Alienated in District.	Total.	Proportion to Area of Holdings.
	No.	acres.	per cent.	acres.	per cent.
1 to 30 acres	268	2,357	0·06	559	23·72
31 to 400 acres	569	98,995	2·59	28,117	28·40
401 to 1,000 acres	630	425,934	11·13	64,054	15·04
1,001 to 10,000 acres	521	1,310,425	34·23	96,753	7·38
10,001 acres and upwards	68	1,990,158	51·99	18,832	0·95
Total	2,056	3,827,869	100·00	208,315	5·44

In the Central-western plain there are under lease 10,270,772 acres of Crown lands, of which 10,090,210 acres are enclosed and 180,562 acres remain open. The total area under conditional lease is 3,646,976 acres, under settlement lease 1,594,047 acres, and under other forms of lease 5,029,749 acres. The land under cultivation comprises an area of 79,122 acres. There are 1,797 lessees, 1,140 of whom occupy Crown lands in addition to their alienated holdings, and 657 occupy Crown lands only.

The area of alienated lands and Crown lands occupied is 14,098,641 acres, and deducting from this the cultivated area—287,437 acres—the area devoted to grazing and dairying is 13,811,204 acres.

RIVERINA DIVISION.

This division may be considered the most important in the State, not only on account of the aggregate area alienated, but also from the fact that it contains a considerably larger area under cultivation than any of the other divisions. The occupation of the alienated land is illustrated by the figures given in the following table:—

Counties.	Occupiers of—							Area Alienated.		
	Freehold.	Private Rented.	Partly Freehold and partly private Rented.	Freehold with Crown Lands attached.	Private Rented with Crown Lands attached.	Partly Freehold, partly Private Rented, and partly Crown Lands.	Total.	Freehold.	Private Rented.	Total.
	No.	No.	No.	No.	No.	No.	No.	acres.	acres.	acres.
Bourke	504	32	17	126	2	4	685	729,614	30,427	760,041
Mitchell	298	50	12	41	3	7	411	671,336	48,793	720,129
Hume	460	80	37	23	1	3	604	850,679	59,982	910,661
Dowling	16	..	..	46	2	4	68	117,878	4,274	122,152
Cooper	120	17	2	78	5	6	228	756,901	16,874	773,775
Urana	470	24	31	42	1	4	572	1,716,278	32,710	1,748,988
Denison	324	39	12	17	2	3	397	585,595	29,757	615,352
Nicholson	108	6	3	62	...	2	181	400,442	7,128	407,570
Sturt	9	3	..	36	..	2	50	569,022	12,429	581,451
Boyd	71	5	2	13	..	1	92	817,525	8,027	825,552
Townsend	229	28	14	46	4	8	329	1,759,108	38,581	1,797,689
Cadell	192	20	14	15	2	2	245	507,589	22,241	529,830
Waradgery	75	15	4	60	1	5	160	834,366	9,480	843,846
Wakool	49	10	3	102	1	4	169	1,207,429	47,241	1,254,670
Caira (part of)	5	1	..	8	..	2	16	260,073	1,030	261,103
Total	2,930	330	151	715	24	57	4,207	11,783,835	368,924	12,152,759

The total area alienated in this division is 12,152,759 acres, or 61·48 per cent. of the whole extent of 19,767,073 acres; the greatest proportion being in the county of Cadell, where 93·51 per cent. of the total area of the county, which is estimated at 566,600 acres, has been alienated; in Hume the area alienated is 90·34 per cent.; in Urana 88·67 per cent.; the proportion gradually diminishing to 10·41 per cent. in Dowling.

The number of holders of rural lands in the Riverina division is 4,207, of whom 2,930 occupy their own freeholds; only 330 are private tenants alone; 151 rent private lands in addition to their freeholds; 715 persons occupy areas of Crown lands, generally for grazing purposes, in addition to their own freeholds; 24 persons occupy private rented lands with Crown lands attached; and 57 persons who possess freeholds also rent land from the Crown and from private owners.

As might be expected, the average area of holdings in this division is high, since the auction and improvement clauses of the Crown Lands Act of 1861 were extensively brought into operation for the purpose of consolidating holdings and preventing the land from falling into the hands of the free selectors, whom the great pastoral lessees did not look upon as desirable neighbours. The land was, indeed, bought up wholesale, the pastoralists being greatly helped by the various banking corporations, and their joint operations resulted in the alienation of immense areas of the best pastoral land in the State. The average area of holdings in the division is 2,889 acres; but in the county of Caira it reaches 16,319 acres;

in Sturt, 11,629 acres; in Boyd, 8,973 acres; in Wakool, 7,424 acres; thence diminishing from 5,464 acres in Townsend to 1,110 acres in Bourke.

By far the largest proportion of the alienated area of this division is enclosed, only 25,644 acres out of a total area of 12,152,759 acres being open. The area under cultivation is 723,911 acres, of which 674,318 acres represent land worked by proprietors, while 49,593 acres are worked by tenants. The holdings in this division are thus distributed :—

Size of Holdings.	Alienated Holdings.	Area of Holdings.		Area in Cultivation.	
		Total.	Proportion to Total Area alienated in District.	Total.	Proportion to Area of Holdings.
	No.	acres.	per cent.	acres.	per cent.
1 to 30 acres	504	3,480	0·03	734	21·09
31 to 400 acres	1,206	246,989	2·03	80,067	32·42
401 to 1,000 acres	1,423	919,537	7·57	218,457	23·76
1,001 to 10,000 acres	898	2,194,383	18·06	271,285	12·36
10,001 acres and upwards	176	8,788,370	72·31	153,368	1·75
Total	4,207	12,152,759	100·00	723,911	5·96

The average area of estates over 10,000 acres in extent is 49,934 acres. The area cultivated on these large holdings is small; but it is, nevertheless, more than twelve times as much as it was eleven years ago, when it stood at 12,012 acres.

The total area of Crown lands occupied is 5,732,854 acres, only 395,418 acres being unenclosed. The area held under conditional lease is 1,306,075 acres; under settlement lease, 448,055 acres; and under other forms of lease, 3,978,724 acres. There are 21,272 acres in cultivation, of which 14,461 acres are in the counties of Bourke, Cowper, Townsend, and Wakool. The number of lessees is 1,132, of whom 796 occupy Crown lands attached to alienated holdings, and 336 occupy Crown lands only. The area of alienated lands and Crown lands occupied is 17,885,613 acres, and deducting from this the cultivated areas—745,183 acres—the area devoted to grazing and dairying is 17,140,430 acres.

THE WESTERN DIVISION.

In the extreme west of the State, settlement is making but slow progress. With the exception of the great mining centre of Broken Hill, situated on the boundary of the neighbouring State of South Australia, around which a large population has settled, the whole of this vast portion of the domain of New South Wales is given up to the depasturing of stock. Owing to the closer settlement of the country to the east of the Darling, and the more favourable climatic conditions, the counties in this district have been shown separately from those west of the Darling, where the general character of the country militates against agricultural production and the successful rearing of cattle, sheep-breeding being practically the only industry. The present state of settlement on the Western plains is illustrated by the figures given below :—

Counties.	Occupiers of—							Area Alienated.		
	Freehold.	Private Rented.	Partly Freehold and partly Private Rented.	Freehold, with Crown Lands attached.	Private Rented, with Crown Lands attached.	Partly Freehold, partly Private Rented, and partly Crown Lands.	Total.	Freehold.	Private Rented.	Total.
	No.	No.	No.	No.	No.	No.	No.	acres.	acres.	acres.
East of Darling—										
Clyde (part of)	31	4	..	14	1	2	52	107,172	3,216	110,388
Gregory (part of)	..	..	..	3	..	..	3	37,518	....	37,518
Canbelego (part of)	3	..	..	6	..	..	9	1,548	....	1,548
Cowper	21	11	1	30	1	..	64	53,422	13,456	66,878
Yanda	6	1	..	7	..	..	14	12,434	40	12,474
Robinson	48	3	1	12	..	..	64	13,724	1,022	14,746
Mouramba	33	3	1	12	..	..	49	12,478	82	12,560
Blaxland	26	1	..	16	1	2	46	62,811	6,862	69,673
Franklin	7	2	..	21	..	1	31	192,719	1,140	193,859
Mossgiel	7	..	1	12	1	..	21	25,241	1,050	26,291
Booroondarra	2	..	..	6	1	..	9	6,610	40	6,650
Rankin	1	..	..	5	..	..	6	4,082	....	4,082
Werunda	4	..	..	4	..	..	8	5,069	....	5,069
Woore	1	1	..	7	..	..	9	6,905	120	7,025
Manara	1	..	..	6	..	..	7	31,252	....	31,252
Waljeers	15	6	1	13	..	1	36	244,684	2,053	246,737
Kilfera	2	..	1	4	..	..	7	13,013	60	13,073
Caira (part of)	43	11	10	9	1	2	76	166,709	3,169	169,878
Taila	18	1	..	4	..	2	25	24,753	1,263	26,016
Wentworth	33	5	..	19	..	1	58	65,807	1,993	67,800
Perry	1	2	..	8	..	..	11	41,887	941	42,828
Livingstone	8	..	..	9	..	..	17	14,228	....	14,228
Total, East of Darling	311	51	16	227	6	11	622	1,143,566	36,507	1,180,073
West of Darling—										
Finch	12	6	..	28	2	2	50	125,097	309	125,406
Narran	17	4	1	18	2	1	43	78,040	36,184	114,224
Culgoa	8	2	..	10	..	..	20	15,249	6	15,255
Gunderbooka	19	1	..	17	..	1	38	32,627	1,460	34,087
Irrara	5	..	..	8	..	..	13	11,890	....	11,890
Thoulcanna	1	..	..	3	..	..	4	3,900	....	3,900
Barrona	1	..	..	1	..	..	2	41	....	41
Landsborough	1	..	..	4	..	..	5	7,233	....	7,233
Killara	2	1	..	2	1	..	6	6,883	264	7,147
Fitzgerald	..	..	..	1	1	..	2	600	40	640
Ularara	2	1	..	4	..	..	7	5,777	35	5,812
Delalah	..	..	..	1	..	..	1	360	....	360
Tongowoko	3	..	..	3	..	..	6	18,961	....	18,961
Poole	..	..	..	1	..	..	1	120	....	120
Yantara	1	1	..	4	..	..	6	4,297	40	4,337
Yungnulgra	39	7	1	8	..	..	55	20,530	134	29,664
Young	32	..	..	15	..	..	47	24,251	....	24,251
Tandora	1	..	..	7	..	..	8	3,500	....	3,500
Mootwingee	..	2	..	6	..	..	8	6,381	81	6,462
Evelyn	4	1	..	5	..	..	10	20,265	320	20,585
Farnell	10	..	..	2	..	..	12	3,190	....	3,190
Yancowinna	143	9	..	10	..	..	162	38,095	74	38,169
Menindie	8	..	..	6	..	..	14	13,380	....	13,380
Windeyer	1	1	..	7	..	..	9	27,413	2	27,415
Tara	3	..	1	16	2	..	22	47,570	4,440	52,010
Total West of Darling	313	36	3	187	8	4	551	515,650	43,389	559,039
Total—Western Division	624	87	19	414	14	15	1,173	1,659,216	79,896	1,739,112

The proportion of land alienated is only 2·17 per cent. of the total area of this division, being an aggregate of 1,739,112 acres out of 80,318,708 acres which the division is estimated to contain. The greatest area alienated is in the county of Waljeers, where there are 246,737 acres, or 14·63 per cent. of the total area of the country held by settlers. Of the total alienated area, 1,659,216 acres are in the occupancy of the landholders, and only 79,896 acres are held under private lease, this kind of tenure being principally met with in the counties of Clyde, Cowper, Blaxland, Franklin, Waljeers, Caira, Wentworth, Narran, Gunderbooka, Perry, Taila, Robinson, Tara, and Mossgiel. The total number of holdings is 1,173, of which 624 are freehold, 87 private rented properties, 19 partly freehold and partly private leasehold, 414 freeholds to which considerable areas of Crown lands are attached, 14 private rented holdings with Crown lands attached, and 15 freeholds with both private rented and Crown lands attached. The average area of alienated holdings for the whole Western Division is 1,483 acres, the average in many counties, owing to the small number of holdings, being very large. In the part of Gregory within the division it reaches 12,506 acres; in Waljeers, 6,854 acres; in Franklin, 6,254 acres; in Manara, 4,464 acres; in Perry, 3,848 acres; in Tongowoko, 3,160 acres; in Windeyer, 3,046 acres; in Narran, 2,656 acres, in Finch, 2,508 acres; in Tara, 2,364 acres; in the portions of Caira and Clyde within the division, 2,235 acres and 2,123 acres respectively; in Evelyn, 2,059 acres; in Kilfera, 1,868 acres; in Blaxland, 1,515 acres; in Landsborough, 1,446 acres; diminishing in the other counties from 1,252 acres, in Mossgiel, to 120 acres in Poole; while in Barrona there are two holdings averaging 20 acres each. There is one holding of 120 acres in Poole, and one of 360 acres in Delalah. The land is used purely for pastoral purposes, except in the vicinity of townships, where market-gardening and fruit-growing are carried on, principally by Chinese.

The area of alienated land enclosed in this division is 1,653,843 acres, and unenclosed 85,269 acres. In cultivation there is an area of 8,214 acres, only 382 acres of which are tilled by tenants. The average area of large estates over 10,000 acres in extent is 27,627 acres. The holdings in the Western Division may be classified as follows:—

Size of Holdings.	Alienated Holdings.	Area of Holdings.		Area in Cultivation.	
		Total	Proportion to Total Area alienated in District.	Total.	Proportion to Area of Holdings.
	No.	acres.	per cent.	acres.	per cent.
1 to 30 acres	447	1,777	0·10	191	10·75
31 to 400 acres	338	46,198	2·66	1,710	3·70
401 to 1,000 acres	166	112,523	6·47	1,868	1·66
1,001 to 10,000 acres	184	528,780	30·40	2,894	0·55
10,001 acres and upwards	38	1,049,834	60·37	1,551	0·15
Total	1,173	1,739,112	100·00	8,214	0·47

The area of Crown lands occupied in this division is very large, there being no less than 73,543,718 acres under various forms of lease. Under homestead lease there are 2,830,432 acres, the bulk of these leases having been converted under the Western Lands Act. There are 232,052 acres under conditional lease, granted under the Act of 1884; but this form of lease is no longer obtainable in the Western Division. Under settlement lease there are 40,811 acres, and under other forms of lease 70,440,423 acres. The number of lessees of Crown lands is 1,435, of whom 443 occupy Crown lands in addition to their alienated holdings, while 992 occupy Crown lands only. The area under cultivation is 9,646 acres.

The total area of alienated lands and Crown lands occupied is 75,282,830 acres, which is all devoted to pastoral pursuits, with the exception of 17,860 acres under crop.

AREA OF HOLDINGS.

It will be gathered from an analysis of the figures which have been given that settlement in New South Wales has hitherto tended towards the concentration into comparatively few hands of the lands alienated to a large number of individual selectors, and that in the great majority of cases the owner of the land is also the occupier. Tenancy, as understood in older settled communities, has made comparatively little progress, 91·65 per cent. of the land alienated being yet in the occupancy of the proprietors themselves, or an area of 44,660,409 acres; whilst only 4,068,133 acres, or 8·35 per cent., are held under lease from the freeholders.

Below will be found the number of holdings of various sizes throughout the State, distinguishing freehold from rented land. It will be understood that here, as elsewhere in this chapter, though reference is made to holders who occupy Crown lands in addition to alienated lands, the area of such Crown lands is not considered in treating of the size of the holdings:—

Size of Holdings.	Number of Holdings.						
	Freehold.	Private Rented.	Partly Freehold and partly Private Rented.	Freehold, with Crown Lands attached.	Private Rented, with Crown Lands attached.	Partly Freehold, partly Private Rented, partly Crown Lands.	Total.
1 to 30 acres	17,904	6,830	1,096	311	49	25	25,815
31 to 400 acres	19,677	7,128	2,302	6,979	310	351	36,147
401 to 1,000 acres	4,392	721	677	3,046	80	255	9,171
1,001 to 10,000 acres	2,188	237	395	2,499	54	410	5,783
10,001 acres and upwards	115	5	19	486	6	89	720
Total	42,776	14,921	4,489	13,321	499	1,130	77,136

The alienated area of the holdings referred to in the table just given, whether freehold or rented, will be found in the figures subjoined, which also show the percentage of alienated land to be found in the holdings of each specified size, as well as the proportion each size of holding, whether freehold or rented, bears to the total area alienated:—

Size of Holdings.	Area of Holdings.			Proportion to Total Alienated Area of the State, exclusive of holdings under 1 acre.		
	Freehold.	Rented.	Total.	Freehold.	Rented.	Total.
	acres.	acres.	acres.	℔ cent.	℔ cent.	℔ cent.
1 to 30 acres	131,389	62,522	193,911	0·27	0·13	0·40
31 to 400 acres	4,223,223	1,198,641	5,421,864	8·67	2·46	11·13
401 to 1,000 acres	5,085,260	751,015	5,836,275	10·44	1·54	11·98
1,001 to 10,000 acres	13,105,567	1,436,010	14,541,577	26·89	2·95	29·84
10,001 acres and upwards	22,114,970	619,945	22,734,915	45·38	1·27	46·65
Total	44,660,409	4,068,133	48,728,542	91·65	8·35	100·00

The above figures strikingly illustrate the present condition of settlement in New South Wales, and their meaning should not be lost sight of by those who study the various phases of settlement in this country. The proportion of land in holdings 30 acres and under in extent is only 0·40 per cent. of the total area of land alienated in the State, and represents an aggregate of 193,911 acres out of a total of 48,728,542 acres; this small acreage consists of 25,315 holdings, each occupying an average of 7·7 acres. Holdings between 31 and 400 acres in extent number 36,147, with an aggregate area of 5,421,864 acres, or 11·13 per cent. of the area alienated in the State, giving an average of 150·0 acres per holding. It is in this category that a great portion of the land devoted to cultivation is to be found. In areas between 401 and 1,000 acres are to be found 9,171 estates, the number decreasing rapidly as the area increases, aggregating in all 5,836,275 acres, or 11·98 per cent. of the area alienated, giving each an average of 636·4 acres. The tendency just noted becomes still more marked in the holdings between 1,001 and 10,000 acres in extent, their number being only 5,783, whilst they aggregate 14,541,577 acres, or 29·84 per cent. of the total area alienated in the State, giving an average of 2,514·5 acres per holding. The climax is reached, however, in the holdings of more than 10,000 acres in extent. Of these there are but 720, aggregating 22,734,915 acres, or 46·65 per cent. of the whole area alienated from the Crown, each averaging an area of 31,576 acres.

SETTLEMENT AND AGRICULTURE.

Some remarks as to the relative condition of agriculture and of settlement on the alienated rural lands of the State cannot fail to be of interest, especially when read in conjunction with the preceding figures. The following table deals with this question, and the figures carry with them their own explanation:—

Size of Holdings.	Alienated Holdings.	Area Alienated.		Area Cultivated.	
		Total.	Proportion to Area of State.	Total.	Proportion to Area Alienated.
	No.	acres.	per cent.	acres.	per cent.
1 to 30 acres	25,315	193,911	0·10	48,540	25·03
31 to 400 acres	36,147	5,421,864	2·73	776,519	14·32
401 to 1,000 acres	9,171	5,836,275	2·94	701,679	12·02
1,001 to 10,000 acres	5,783	14,541,577	7·32	803,887	5·53
10,001 acres and upwards	720	22,734,915	11·45	313,783	1·38
Total	77,136	48,728,542	24·53	2,644,408	4·43

Although the highest proportion of land cultivated in any of these series, when compared with the total area alienated in the State, is found in holdings from 1,001 to 10,000 acres in extent, yet when compared with the aggregate area alienated in the series itself it represents only 5·53 per cent. of it; whilst on the smaller holdings, less than 31 acres in extent, as much as 25·03 per cent. of the area alienated is under cultivation. The proportion considerably decreases as the higher areas are reached, being reduced to 1·38 per cent. in those over 10,000 acres.

From the table given on page 149 some interesting information may be gleaned with regard to the proportion of the number of owners of land who still occupy their freeholds, those who reside on rented lands, and those who occupy, in addition to their freeholds, lands rented either from private owners or from the Crown; but a more comprehensive view of these two phases of settlement may be obtained by an examination of the following table, in which the holdings are divided into a greater number of categories according to their sizes:—

Size of Holdings.	Holdings consisting of—							Total Area Alienated.
	Freehold Land.	Private Rented Land.	Partly Freehold & partly Private Rented Land.	Freehold Land, with Crown Lands attached.	Private Rented Land, with Crown Lands attached.	Partly Freehold, partly Private Rented, & partly Crown Lands.	Total.	
	No.	No.	No.	No.	No.	No.	No.	acres.
1 to 5 acres	9,930	3,813	414	185	18	5	14,365	36,100
6 to 15 acres	4,556	1,854	398	68	15	14	6,905	65,984
16 to 30 acres	2,518	1,163	284	58	16	6	4,045	91,827
31 to 50 acres	4,183	1,556	281	1,010	56	12	7,098	294,711
51 to 100 acres	4,961	2,214	526	1,397	70	49	9,217	729,306
101 to 200 acres	5,271	1,990	771	1,825	72	113	10,042	1,516,938
201 to 300 acres	2,604	889	417	1,205	50	89	5,254	1,319,307
301 to 400 acres	2,058	479	307	1,542	62	88	4,536	1,561,602
401 to 500 acres	1,247	261	220	640	19	49	2,436	1,110,554
501 to 600 acres	849	140	147	461	15	46	1,658	916,872
601 to 700 acres	998	157	114	1,104	26	48	2,442	1,577,234
701 to 800 acres	519	67	81	307	9	51	1,034	780,272
801 to 900 acres	400	40	61	253	6	36	796	679,623
901 to 1,000 acres	379	56	54	281	5	30	805	771,718
1,001 to 1,500 acres	1,089	116	162	877	18	129	2,391	2,949,188
1,501 to 2,000 acres	357	55	64	432	7	57	972	1,705,726
2,001 to 3,000 acres	351	30	82	462	17	82	1,024	2,519,534
3,001 to 4,000 acres	154	12	38	240	1	46	491	1,701,921
4,001 to 5,000 acres	84	7	16	163	3	34	307	1,384,241
5,001 to 7,500 acres	92	10	25	191	6	38	362	2,210,914
7,501 to 10,000 acres	61	7	8	134	2	24	236	2,070,053
10,001 to 15,000 acres	46	1	9	134	3	23	216	2,658,641
15,001 to 20,000 acres	24	1	3	93	1	18	140	2,451,954
20,001 to 30,000 acres	21	3	3	102	1	20	150	3,699,219
30,001 to 40,000 acres	6	....	3	43	1	10	63	2,197,091
40,001 acres and upwards	18	....	1	114	....	18	151	11,728,012
Total	42,776	14,921	4,489	13,321	499	1,180	77,136	48,728,542

From the above it will be seen that the total number of occupiers of freeholds only is 42,776, the proportion to the total number of occupiers being fairly constant in each size of holdings. Absolute tenants of private lands, who number 14,921, are far more numerous in the smaller classes of holdings, and rapidly diminish both in number and in proportion as the estates become larger. The same is the case with regard to holders of freehold and private rented land, who number only 4,489. The persons who possess freeholds with Crown lands attached number 13,321, and over 46 per cent. of the holdings over 1,000 acres in extent are in this category. Occupiers whose holdings are partly made up of private rented lands and partly of Crown lands only number 499 altogether; while owners of freehold, who are Crown tenants and private tenants at the same time, show a total of 1,130.

There are 4,370 occupiers of Crown lands only, not connected with alienated holdings. The area of alienated holdings over 1 acre in extent in the State is 48,728,542 acres, and of the Crown lands occupied 119,287,583 acres, making a total of 168,016,125 acres. Of this area, 165,178,044 acres are used for grazing and dairying, and 2,838,081 acres for agriculture.

The figures in regard to holdings represent rural settlement only, and account for 48,728,542 acres out of a total of 49,970,335 acres that have been alienated. The balance of 1,241,793 acres represents lands in cities and towns, and rural lands abandoned, to all appearances, by their owners. The lands of the State are held by 186,081 persons, the owners being almost equally distributed between the towns and the country.

ROADS AND BRIDGES.

For some years subsequent to its first colonisation, settlement within the State was restricted to that portion of the territory lying between the Pacific Ocean and the Great Dividing Range. Here, by the aid of convict labour, main roads were formed, connecting the infant towns of Parramatta, Liverpool, Windsor, and Penrith with the metropolis. All access to the interior of the country, was, however, barred by the apparently insurmountable sandstone precipices rising on the farther side of the Nepean. The intrepid explorer, George Bass, who attempted the crossing in 1796, was forced to abandon the task, stating that he believed it impracticable even for a person on foot. In 1813, however, after a protracted season of drought, involving heavy losses of stock, the settlers recognised that the future of the country depended on an extension of the pastoral area beyond its then contracted limits. Consequently, in May, 1813, three gentlemen, Messrs. Wentworth, Blaxland, and Lawson, again essayed the task of finding a way over the mountains. After encountering tremendous difficulties—which appear almost incredible to the present generation, seeing that a railway track has been constructed over the same route, by which Bathurst may be reached in a few hours—sometimes scaling lofty precipices, at others creeping slowly through dense forests, the explorers found themselves on the other side of the range, and cast their eyes for the first time on the rich Bathurst Plains. Shortly after their return, on the 6th June, Governor Macquarie despatched a party of surveyors under Mr. Evans, the Deputy Surveror-General, to determine the practicability of making a road. The report was favourable, and the construction of the Great Western Road was at once begun, the work being carried out by gangs of bond labourers. The track was completed as far as Bathurst by the 21st January, 1815.

The opening up of the fertile lands around Bathurst, through the completion of this mountain road, gave such an impetus to settlement, that it was found impossible to keep pace in the matter of road-making with the demands of the settlers. The authorities, therefore, contented themselves with maintaining the roads already constructed, and extending them in the direction of the principal centres of settlement. In fact, these main roads were the only ones which received attention for many years. Had the progress of settlement subsequent to 1850 been similar to that of preceding years this condition of things would have sufficed; such, however, was not the case. The discovery of gold completely altered the circumstances of the State, and during the period of excitement and change which followed that remarkable event, so many new roads were opened, and traffic increased to such an extent, that the general condition of the public highways was by no means good. While yeoman service was done by the road pioneers prior to 1857, the modern system of road-making may be said to have begun in that year, consequent on the creation of the Roads Department, which was formed to take control over the roads. It was not, however, until 1864, that the whole of the roads, both main and subordinate, received consideration at the hands of the State.

The principal main roads of the State are :—

Northern Road—length, 405 miles, from Morpeth to Maryland, New England.

Western Road—length, 338 miles, from Sydney to Warren, through Bathurst, Orange, and many other important townships; thence prolonged to the Darling River, at Bourke, by a line 175 miles in length.

Southern Road—length, 385 miles, from Sydney to Albury. This road was, before the construction of the railway, the great highway between Sydney and Melbourne.

South Coast Road—length, 250 miles, This road after leaving Campbelltown, ascends the coast range, along the top of which it runs as far as Coal Cliff. It then traverses the Illawarra district, parallel to the coast, and passes through the rich lands watered by the Shoalhaven, Clyde, and Moruya Rivers, as far as Bega, whence it extends as a minor road to the southern limits of the State.

In no case has any of these roads the importance which it at one time possessed. The railways of the State for the greater part follow the direction of the main roads, and draw to themselves nearly all the through traffic. The existing tendency is to make the roads act as feeders to the railways, by converging the traffic from outlying districts towards convenient stations along the line.

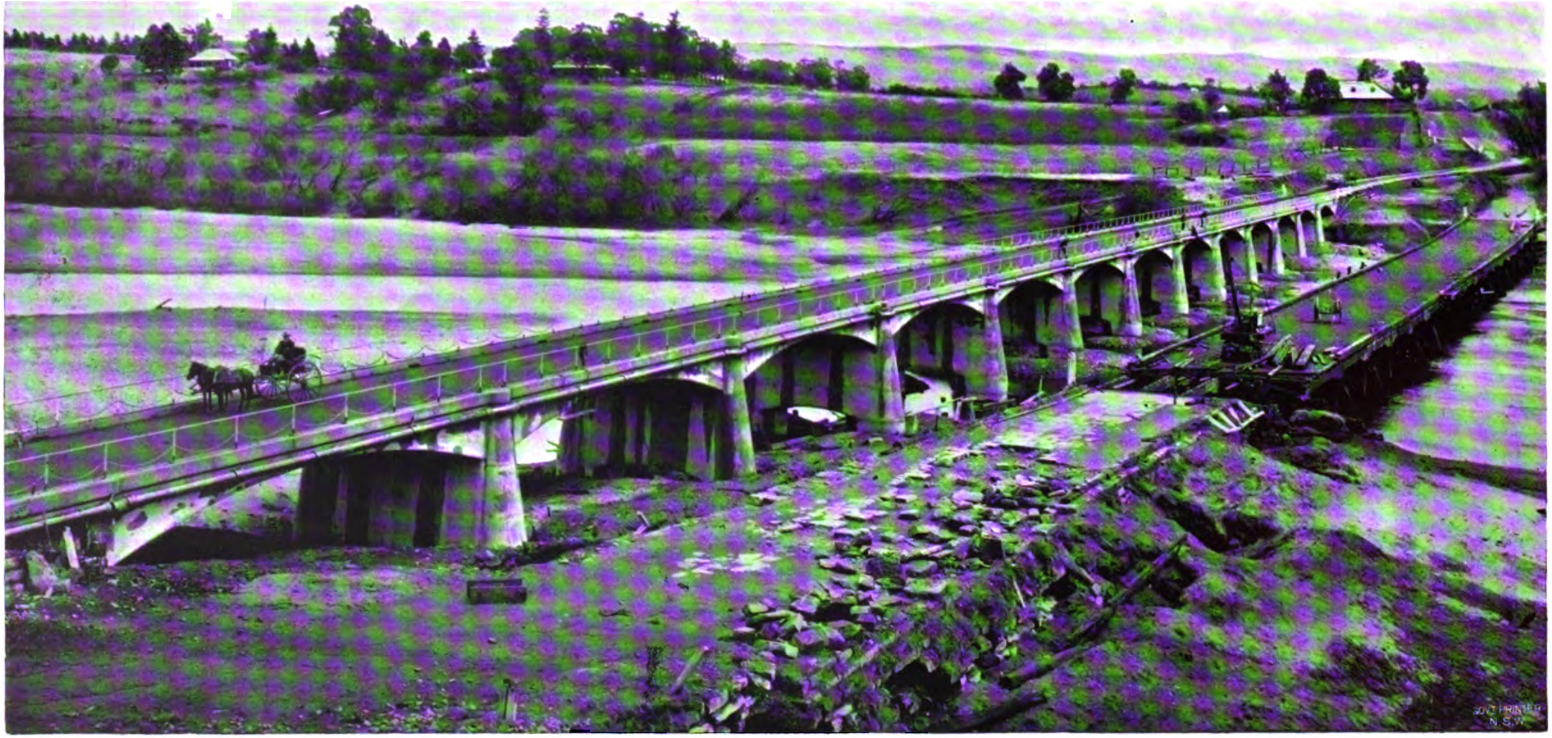
The limited funds placed at the disposal of the Department for expenditure on works do not admit of the extension of roads in a manner that their importance demands. The greater proportion of the expenditure has been devoted to the upkeep of existing works. The postponement of the extension of works and the opening of new roads and deviations, many of an important character, is a matter for regret, as there is evidence on all sides of a general increase in settlement on the land, which will probably be retarded by insufficiency of access. In many places the subdivision of both Crown and private lands for closer settlement has given an impetus to cultivation and dairying; and especially in the latter case is it necessary to provide for constant traffic, which, from the nature of the industry, requires trafficable roads in all seasons. Many roads on which heavy expenditure has taken place have been more or less superseded by railways; and, although provision for through traffic is thus reduced, it has rendered necessary the opening of new roads as feeders, and in this manner the earlier lines of traffic become practically deserted for others on routes more suitable to the altered conditions. In a few cases, an important departure, which could be extended with advantage, has been made from the policy which has hitherto obtained of opening roads after settlement has taken place. Under the old system settlers took up land, which in course of time became more valuable through improved approaches provided at the expense of the State. But many rich lands suitable for closer settlement are at present inaccessible, and the Department has, therefore, in conjunction with the Lands Department, contributed towards the opening of roads thereto before alienation. The Department has the opportunity of selecting routes on the most suitable gradients and locations, thus avoiding the expense of establishing deviations hereafter, while the Crown will be recouped to some extent for the outlay incurred. The most notable of these cases is the road between Coramba and Dorrigo.

Traction engines are becoming a feature on many of the roads, and although competition with the railway is not a matter for serious consideration, they are, nevertheless, a severe strain on roads and bridges, inasmuch as the extra load passing over bridges and culverts, capable of carrying ordinary traffic for many years longer, means extra expense in strengthening or renewal of structures earlier than would otherwise be necessary. The disastrous effect of narrow tyres on roads has been repeatedly brought under notice, but until legislation is introduced to regulate the load to be carried on wheels with tyres of a given width the State must submit to increased cost in road maintenance.

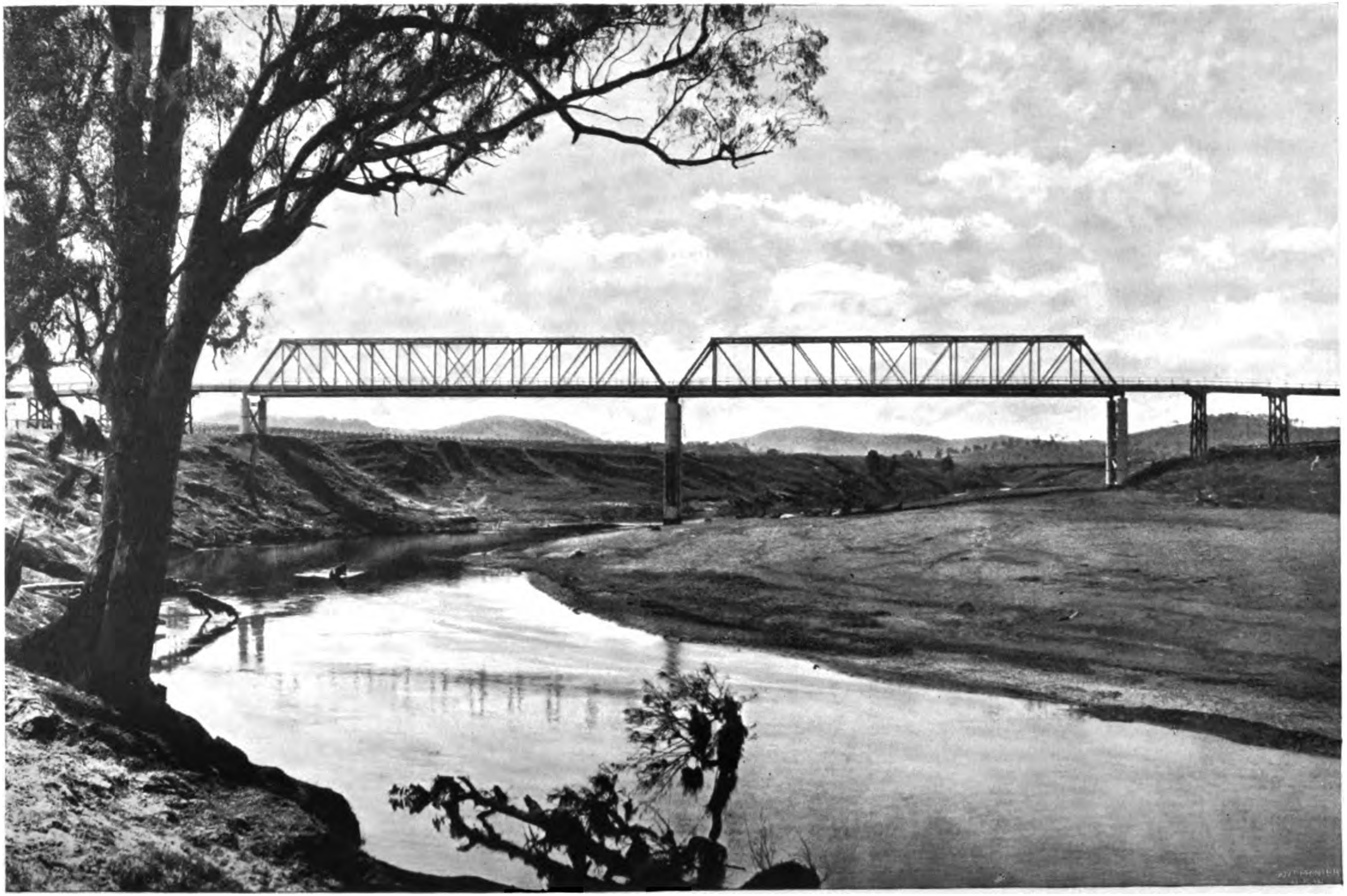
The outlay by the Government upon the different roads is made in accordance with the recommendation of the District Assistant Engineer, and is based on the requirements of each road. At one time the roads of the State were divided into seven classes according to their importance, and the yearly expenditure ranged from £50 per mile on roads in the first class to £5 per mile on those in the seventh class.

The network of roads spreading over the face of the State is divided, for purposes of maintenance, into road districts and road trusts. The whole State is apportioned into sixty-five districts, each of which is placed in charge of a District Assistant Engineer, who is directly responsible to the Commissioner for Roads. The District Assistant Engineers have under their care the greater part of the roads of the State outside the incorporated areas, as well as a portion of those within such limits. The road trusts have the supervision of the expenditure of certain grants for the maintenance of roads in districts which are chiefly of minor importance; there are, however, some important roads in the vicinity of the metropolis governed by trusts. The length of roads in charge of District Assistant Engineers on the 30th June, 1906, was 48,311 miles, while 195 miles were under the care of road trusts. There were also within the municipal areas 1,338 miles, which were subsidised by the Department, making a total of 49,844 miles under the control of the Government. Of the 48,311 miles in charge of District Assistant Engineers, 9,946 miles were metalled, gravelled, ballasted, or corduroyed; 6,885 miles were formed; 17,766 miles were cleared and drained; and 13,714 miles were roads which wind their way through the forests of the interior, chiefly along the lines marked out by the cart-wheels of the foremost settlers, forming in dry weather, adequate means of communication, although in seasons of rain they are frequently impassable. Besides the roads mentioned, there are about 1,500 miles of mountain passes. Many of these presented the most formidable difficulties, and their construction reflects great credit upon the engineering skill of the Department, which has for so many years designed and supervised the construction and maintenance of the roads and bridges of the State.

Of the earliest bridges erected in the State many were built of stone, and are in existence still. Those erected in the period following the extension of settlement to the interior were principally of timber, and have since been replaced, after a life of about twenty-five years. Nearly all the large bridges of recent date are of iron and steel, and some of them have been erected under engineering conditions almost unique, owing to the peculiarity of the river flow in certain parts of the country. Perhaps the most important of these works constructed in the State are the Pyrmont and Glebe Island bridges. The total length of the Pyrmont structure and its approaches is 1,758 feet, the bridge itself spanning a distance of 1,209 feet, of which total the swing span represents 223 feet, the remainder being covered by the twelve side spans each of 82 feet 4 inches. The swing span, weighing 800 tons, is carried on a pivot which has its foundation on a caisson of 42 feet diameter, sunk to a depth of 62 feet. Its floor space is 12,000 superficial feet, as against 10,600 on the Newcastle-on-Tyne bridge, and the roadway is 4 feet wider than that on the Tower Bridge of London. The swing itself, which is operated by two 50-h.p. electrical motors supplied with power from the Ultimo



BRIDGE OVER HAWKESBURY RIVER RICHMOND.



LUSKINTYRE BRIDGE, HUNTER RIVER.

Power-house, can be opened or closed in forty-four seconds, at a cost of five farthings for the double operation, which includes the opening and closing of the gates as well as the swing. The total cost of this bridge was £145,189.

The Glebe Island Bridge is over 2,300 feet long from end to end, and consists of a steel swing bridge in the centre of the bay, with a stone causeway approach to either shore. A steel over-bridge is provided on the Glebe side to permit of traffic passing thereunder to the area on the northern side of the bridge, which has been made by partly cutting down Glebe Island, and reclaiming with the spoil a valuable deep-water frontage of 2,800 feet, with 13 acres of level land at the back, which can, when required, be easily connected with the railway system of the State by a short line to Petersham. The main bridge is 353½ feet long between abutments, and possesses a steel swing span, 191 feet 2 inches long, affording two clear waterways each of 60 feet for shipping, as against one of 34 feet in the old swing. This increase in waterway will permit of the passage of the largest over-sea vessels, thus opening up the great possibilities of the frontages to the south of the bridge. The two steel side spans are 81 feet 2 inches centres, affording 20 feet clear headway above high-water mark in lieu of the 12 feet available in the old bridge. The bridge is provided with a steel floor carrying a 40 feet wood-blocked carriage way, and two 5 feet footpaths, which will enormously improve the travelling facilities. The swing span, though smaller than the one at Pyrmont, contains a floor-space of 9,600 feet, which compares favourably with the swings in Clarence Bridge at Cardiff (7,640 square feet); the Hawarden Bridge (8,470 feet); or the bridges over the Manchester Ship Canal (9,430 feet); and is but little less than that provided on the swing in the well-known bridge at Newcastle-on-Tyne, which is understood to have a larger floor-space than any other bridge in the United Kingdom. The total weight of the swing span of the Glebe Island Bridge is 650 tons, and it revolves on a cast-steel roller 37 feet in diameter, carrying steel-covered treads. The swing, as well as the gates cutting off the road traffic at either end of the swing span, are operated by electricity obtained from the Ultimo Power-house, and it is possible to open or close the swing in forty-four seconds. The cost of this bridge was £107,000.

On the 30th June, 1906, there were, altogether 3,548 bridges of 20 feet span and over, covering a length of 333,966 feet; 29,658 concrete, stone, brick, or timber culverts, 263,911 feet in length; 13,906 pipe culverts, 340,273 feet in length; and 25,608 causeways, of a total length of 575,362 feet. Where local conditions have not favoured the erection of a bridge, or the traffic justified its construction, a punt or ferry has been introduced. On the 30th June, 1906, there were 102 ferries operated by punts, ten of which were worked by steam or oil, and wire-rope; 85 by hand-gearing and wire-rope; 7 by wire-rope without gearing; and the total width between mooring posts was 75,949 feet. Two ferries were operated by horse-boats, and were worked by wire-rope without gearing, and the total width between the mooring posts was 845 feet. There were also 27 ferries operated by boats only, the total width between mooring posts being 5,860 feet. The Department also had charge of one steam-launch, and 83 iron and timber flood-boats, as well as 13 punt slips for the execution of repairs.

The use of roads as the main arteries along which traffic from the metropolis to the interior flows has been superseded by the railways; nevertheless, they are still the sole means of communication throughout a large part of the interior, besides serving as most valuable feeders to the railway system of the country. No revenue is directly derived from roads, but their indirect advantages to the country have been very great, and after the lands and the railways they form the largest item of national property. It is estimated that £23,800,000 has been expended on roads and bridges since 1857, and their present value to the State, allowing for depreciation, is not less than £18,000,000. Their indirect value cannot be calculated; but as an instance of the change brought about by the system of road construction, it may be mentioned that after the organisation of the Roads Department on its present basis the cost of carriage of goods by road and the time of transit were reduced by more than one-half, as will appear from the following statement:—

Main Roads.	Distance.	Carriage by Road, 1857.		Carriage by Road, 1864.	
		Time in transit.	Cost per ton.	Time in transit.	Cost per ton.
	miles.	days.	£ s. d.	days.	£ s. d.
Sydney to Goulburn	134	17½	12 5 0	7½	3 15 0
„ Bathurst	145	23½	15 10 0	11	6 10 0
Newcastle to Murrurundi	119	21	9 0 0	8	6 10 0

The progress between 1857 and 1864 was very great. Part of the advance may, without hesitation, be ascribed to improvement of the roads; but the decline in the demand for teams consequent on the cessation of the gold rush also caused a fall in the cost of transit. Since 1864 the price of carriage by road has not declined, most of the traffic being through districts remote from the centres of population, where the requirements of the teamsters are costly to supply. The roads followed by the teams are those leading to the railway lines, and the loading consists for the most part of station supplies, wool, and other produce. The rates vary according to the distance and the nature of the country traversed, but the following scale may be taken as typical of the ordinary charges for outward loading—that is, from the interior to the railways. Inward goods average about 1d. per mile less than those outward:—

	s.	d.	
Up to 40 miles	1	3	per ton per mile.
100 „	1	0	„
„ 200 „	0	11	„
„ 300 „	0	10	„

A slight consideration of these figures will be sufficient to show how greatly the business of the country has been facilitated by the construction of railways. If 100 miles be assumed as the average distance which goods are carried, the prevailing rate by teams would be 12d. per ton per mile. On the railways, as far back as 1872, the carriage was only 3·6d., and to-day it averages a little over 1·2d. It would be overstating the case against road carriage, however, if the latter figure were compared with the average price charged by teams; but a comparison in every respect perfectly fair can be made between the cost of carrying general goods by rail—only 2·45d. per ton per mile—and the cost of sending goods by teams, which, as stated above, is 12d. per ton per mile. The saving by rail carriage is, therefore, 80 per cent.; and if it had been possible for the whole of the railway traffic for the year 1904 to be carried by teams, the cost would have been £9,496,195, instead of the sum of £1,899,239 (exclusive of terminal charges) actually charged by the Railway Commissioners. In the portion of this chapter devoted to goods traffic on the railways, particulars are given of the gradual cheapening of this form of carriage during the past thirty-three years.

The old-time spectacle is now occasionally observed of huge loads of goods being carried along the main roads within sight of the railway lines. The price paid to carriers is not usually disclosed, but from the nature of things it is probably less than would have been paid to the Railway Commissioners for the same service. The competition of teams with the railway for the carriage of a certain class of goods is made possible by the cheapness of fodder and the low price of horses, and to the circumstance that a number of carriers could not otherwise find employment; moreover, the traffic lasts only for a few months in each year, and does not affect the railway earnings to any appreciable extent.

The total expenditure on account of roads of all classes, and of bridges, culverts, punts, and ferries during the year ended 30th June, 1906, was £458,592. In this expenditure is included the cost of administering the Department, services for other Departments, and payments on account of punt approaches and similar works incidental to the road traffic of the country. The expenditure in the construction and maintenance of roads and bridges since 1857, with details since the year 1881, is given below. Until recent years, the expenditure on these works increased at a much faster rate than the population:—

Year.	Expenditure by Roads Department.	Expenditure by Trustees.	Total.
	£	£	£
1857 to 1880	5,430,923	782,907	6,213,830
1881	484,567	23,186	507,753
1882	577,212	24,722	601,934
1883	613,847	24,938	638,785
1884	750,584	27,722	778,306
1885	800,962	24,404	825,366
1886	628,379	28,414	656,793
1887	721,994	45,433	767,427
1888	663,929	31,503	695,432
1889	632,398	31,361	663,759
1890	770,809	34,500	805,309
1891	965,688	31,990	997,678
1892	859,028	30,605	889,633
1893	676,233	30,330	706,563
*1894–5	800,620	30,034	830,654
†1896	757,115	19,285	776,400
†1897	666,300	9,910	676,210
†1898	605,497	10,601	616,098
†1899	636,859	8,710	645,569
†1900	671,134	7,472	678,606
†1901	850,933	9,074	860,007
†1902	889,964	7,817	897,781
†1903	707,896	6,517	714,413
†1904	491,555	3,404	494,959
†1905	399,951	2,132	402,083
†1906	457,421	1,171	458,592
Total	22,511,798	1,288,142	23,799,940

* 1894 and first half of 1895. † Year ended June.

Besides the roads maintained by the Government, there were, in the month of February, 1905, 7,743 miles of roads and streets belonging to the municipalities of the State. Of these roads 2,597 miles were metalled, gravelled, or ballasted, and 1,373 formed; while 1,839 miles were cleared, and 1,934 miles not cleared. Their value without the land, but inclusive of footpaths, kerbing, and guttering, is estimated at £6,110,100. As already pointed out, the length of roads within municipalities subsidised by the Government was 1,338 miles.

RAILWAYS AND TRAMWAYS.

RAILWAY CONSTRUCTION.

THE first definite movement in the direction of introducing the benefits of railway communication to New South Wales was taken in August, 1846, when it was resolved at a public meeting held in Sydney that a survey should be made of a line to connect the metropolis with Goulburn. Nothing further was done, however, until September, 1848, when the Sydney Railroad and Tramway Company was formed, with a capital of £100,000, having for its object the construction of railways to Parramatta and Liverpool, which it was proposed to extend later on to Bathurst and Goulburn. On the 3rd July, 1850, the Hon. Mrs. Keith Stewart, daughter of Governor Sir Charles Fitzroy, turned the first sod of the first railway constructed in Australia. No difficulty was experienced in obtaining an ample supply of labour at the commencement of operations, but hardly had the enterprise got fairly under weigh, when the discovery of gold led to an exodus of the whole of the company's servants, and the Government had to step in and take over the works. Undaunted by the ill success of the Sydney Railroad and Tramway Company, another company was promoted in 1853 for the purpose of constructing a railway from Newcastle to Maitland, but labour conditions proved too strong for it, and it was not long before it shared a similar fate to that of its predecessor. With the assumption of control by the Government, the work of construction was vigorously pushed forward, and on the 26th September, 1855, the line from Sydney to Parramatta, 14 miles in length, was opened for traffic, while the extension to Goulburn was completed by the 27th May, 1869. In the meantime—by the 11th April, 1857—communication had been established between Newcastle and East Maitland.

During the twenty years which followed the opening of the first line, railway construction progressed at a very slow rate, for in 1875, the lines in operation had only reached a length of 435 miles, an average of 21¾ miles per year. In 1875, a slight improvement took place, when 33 miles were opened; but from 1876 to 1889, greater activity was manifested, 1,748 miles being constructed during the period, or a yearly average of 125 miles. This rate of increase was not sustained, however, only 14 miles being opened in the next three years. During the year ended June, 1893, 154 miles were opened; 150 miles in the succeeding year; and 30 miles in the year ended June, 1895. In the following year no new lines were opened; but during the year ended June, 1897, 108 miles were added, and in the course of the next twelve months, 52 miles. During the eight years ended June, 1906, a further length of 699 miles was brought into use.

From the 7th September, 1899, the private line from Broken Hill to Tarrawingee, 40 miles 7 chains in length, also became the property of the State. Under an agreement between the Railway Commissioners and the Silverton Tramway Company, the Company works this line in conjunction with its own. The Government increased the mileage opened during 1901, by the purchase from private owners of a short line, 4 miles 41 chains in length, between Clyde and Carlingford.

The progress in construction of the State railways of New South Wales may be traced in the statement given below. Included in the mileage are the Campbelltown-Camden, and Yass tramways, which are worked with the railways :—

Year.	Opened during the year.	Total opened.	Year.	Opened during the year.	Total opened.
	miles.	miles.		miles.	miles.
1855	16	16	1881	148	996
1856	9	25	1882	282	1,278
1857	17	42	1883	52	1,330
1858	15	57	1884	301	1,631
1859	nil.	57	1885	114	1,745
1860	13	70	1886	162	1,907
1861	4	74	1887	151	2,058
1862	24	98	*1888	68	2,126
1863	27	125	†1889	57	2,183
1864	20	145	†1890	10	2,193
1865	nil.	145	†1891	1	2,194
1866	nil.	145	†1892	3	2,197
1867	60	205	†1893	154	2,351
1868	44	249	†1894	150	2,501
1869	70	319	†1895	30	2,531
1870	21	340	†1896	nil.	2,531
1871	19	359	†1897	108	2,639
1872	38	397	†1898	52	2,691
1873	5	402	†1899	15	2,706
1874	nil.	402	†1900	105	2,811
1875	33	435	†1901	34	2,845
1876	73	508	†1902	181	3,026
1877	90	598	†1903	112	3,138
1878	90	688	†1904	143	3,281
1879	45	733	†1905	nil.	3,281
1880	115	848	†1906	109	3,390

* Six months ended June. † Year ended June.

Of the 3,390 miles in operation on the 30th June, 1906, there were 3,187½ miles of single line, 194 miles of double line, and 8½ miles of line with four tracks.

RAILWAY SYSTEMS.

The railways of the State are divided into three branches, each representing a system of its own. The southern system, which is the most important, serving as it does the richest and most thickly-populated districts, and placing Sydney, Melbourne, and Adelaide in direct communication, has several offshoots. From Culcairn, there are two branch lines, one connecting with Corowa on the Murray River, and the other with Germanton; from The Rock a line extends to Lockhart; from Junee a branch extends as far as the town of Hay in one direction, and Finley in another, and places the important district of Riverina in direct communication with Sydney. From Cootamundra a southerly branch carries the line to Tumut, and another in a north-westerly direction through Temora to Wyalong. From Murrumburrah a branch has been constructed to Blayney, on the western line, thus connecting the southern and western systems of the State. From Koorawatha a branch has been laid down to connect Grenfell with the railway system. Nearer the metropolis, the important town of Goulburn is connected with Cooma, bringing the rich pastoral district of Monaro into direct communication with Sydney. From Goulburn a branch line has also been opened to Crookwell. Another line that forms part of the southern system has been constructed to Nowra, connecting the metropolis with the coastal district of Illawarra, which is rich alike in coal and in the produce of agriculture. The western system of railways extends from Sydney over the Blue

Mountains, and has its terminus at Bourke, a distance of 503 miles from the metropolis. Leaving the mountains, the western line, after throwing out a branch from Wallerawang to Mudgee, enters the Bathurst Plains, and connects with the metropolis the rich agricultural lands of the Bathurst, Orange, and Wellington districts. Beyond Dubbo it enters the pastoral country. At Blayney, as before stated, the western line is connected with the southern system by a branch line to Murrumburrah; at Orange a branch connects that town with Forbes on the Lachlan River, and from Parkes, one of the stations on this branch line, an extension to Condobolin on the Lachlan River has been constructed. Further west, at Dubbo, a branch line extends to Coonamble, and from the main line at Nevertire, a short line extends to the town of Warren, and at Nyngan a branch line connects the important mining district of Cobar with Sydney. From Byrock a line branches off to Brewarrina. The western system also includes a short line from Blacktown to Richmond on the Hawkesbary River. The northern system originally commenced at Newcastle, but a connecting line has been constructed, making Sydney the head of the whole of the railway systems of the State. This connecting line permits of direct communication between Adelaide, Melbourne, Sydney, and Brisbane, a distance from end to end of 1,808 miles, or altogether between the terminus of Oodnadatta, in South Australia, and Cunnamulla, in Queensland, there is one continuous line of railway, 3,100 miles in length. The northern system comprises a branch from Werris Creek, *via* Narrabri and Moree, to Inverell, thus placing the Namoi and Gwydir districts in direct communication with the ports of Newcastle and Sydney. There is also under construction a line from Narrabri to Walgett, with a branch to Collarendabri, and the portion from Narrabri West to Cryon, a distance of 74½ miles, has been opened for traffic. A portion of the North Coast railway has also been constructed from Murwillumbah, on the Tweed River, to Grafton, on the Clarence River, having a length of 149 miles. A short line branches off the main northern line at Hornsby, and connects with the north shore of Port Jackson at Milson's Point.

CONTROL OF STATE RAILWAYS.

Up to October, 1888, the control of the railways was vested in the Minister for Works, the direct management being undertaken by an officer under the title of Commissioner. It was, however, recognised that political influence entered unduly into the management of this large public asset, and, as a consequence, the "Government Railways Act of 1888" was passed, since consolidated as the "Government Railways Act, 1901," with the object of removing the control and management of the railways from the political arena, and vesting them in three railway Commissioners, who were required to prepare for presentation to Parliament an annual report of their proceedings, and an account of all moneys received and expended during the preceding year. The Railway Commissioners Appointment Act of 1906 dissolved the existing Commission, and provided for the appointment of a Chief Commissioner, an Assistant Commissioner of Railways, and an Assistant Commissioner of Tramways. While the avowed object of State railway construction has been to promote settlement, apart from consideration of the profitable working of the lines, the principle has nevertheless been kept in view that in the main the railways should be self-supporting.

COMPARISON OF RAILWAY FACILITIES.

The progress of the accommodation afforded by the State railways can be fairly gauged by comparing the population and area of territory to each mile of line open for traffic at different periods. Thus, in 1860 there were

4,979 persons to each mile of line, but by the end of the year 1880 the work of construction had proceeded at a rate so much faster than the increase in population that the average number of persons per mile had fallen to 882, so that the facilities afforded by the railways were more than five times as great as in the year first named; while by 1906 the average population per mile of line was reduced to 441. The decrease in the area of territory to each mile of line open has been very rapid, ranging from 4,438·6 square miles in 1860 to 91·55 square miles in 1906. The following statement shows the extension of railway facilities since 1860 :—

Year.	Population to each Mile of Line open.	Area to each Mile of Line open.	Year.	Population to each Mile of Line open.	Area to each Mile of Line open.
	No.	sq. miles.		No.	sq. miles.
1860	4,979	4,438·57	1896	510	117·73
1865	2,822	2,142·76	1897	497	115·46
1870	1,467	913·82	1898	492	114·82
1875	1,366	714·25	1899	497	110·53
1880	882	366·39	1900	464	109·21
1885	544	178·05	1901	466	102·68
1890	502	141·68	1902	461	99·01
1891	521	141·67	1903	452	98·99
1892	538	141·42	1904	441	94·70
1893	515	132·16	1905	451	94·70
1894	495	124·23	1906	441	91·35
1895	501	122·76			

In the following table are given the average population and area of territory per mile of line open in the principal countries of the world. It must, however, be recognised that a fair comparison can only be made between this State and other young countries in process of development :—

Countries.	Length of Railway.	Per Mile of Line open.	
		Population.	Area.
	miles.	No.	sq. miles.
United Kingdom	22,843	1,892	5
France	24,580	1,585	8
Germany	34,022	1,657	6
Austria-Hungary	23,729	1,913	10
Belgium	2,830	2,365	4
Netherlands	1,817	3,032	7
Switzerland	2,898	1,182	5
Sweden	7,631	689	23
Norway	1,548	1,447	80
Russia	40,507	3,569	214
Spain	8,520	2,185	23
Italy	10,068	3,325	11
India (inclusive of Native States)	27,565	10,679	64
Canada	19,431	276	186
Cape Colony	3,565	676	78
Argentine	12,000	451	95
Brazil	10,408	1,377	309
Chili	2,875	943	107
United States of America	212,349	358	17
Japan	4,889	9,780	30
New South Wales	3,390	441	92
Victoria	3,398	358	26
Queensland	3,405	157	197
South Australia	1,925	196	469
Western Australia	2,260	113	432
Tasmania	618	293	42
New Zealand	2,407	366	43

GRADIENTS.

The railways of the State have been constructed with a large proportion of steep gradients, but much has been done during the last few years to reduce some of the heaviest of these. The Railway Commissioners, in one of their annual reports, drew a comparison between the New South Wales lines and the Alpine railways, and it was found that the gradients were steeper, and the curves sharper, on the lines of this State than on the Alpine lines. By reducing some of the gradients, and introducing locomotives of greater power than were formerly employed, considerable economy in working, as well as the expediting of traffic, has been effected. The traffic is now carried on more satisfactorily, and the expense of extensive duplication works, which would have been necessary under the system which previously existed, has been postponed for years. However, a great deal remains to be accomplished in the matter of reducing gradients, as will be seen on reference to the following table, which shows the number of miles on different gradients in June, 1905. The distances given include the increased length of lines for deviations, and are therefore in excess of the time table distances :—

Gradients.	Southern System.	Western System.	Northern System.	Total.
1 in	miles.	miles.	miles.	miles.
18 to 30	3½	1¾	......	5¼
31 ,, 40	58¼	65¼	32¾	156¼
41 ,, 50	64¾	50½	76½	191¾
51 ,, 60	46¾	55¾	45¼	147¾
61 ,, 70	47½	54¼	31½	133¼
71 ,, 80	81¾	65	83¾	230½
81 ,, 90	32¼	35½	33½	101¼
91 ,, 100	60¾	83½	65	209¼
101 ,, 150	110¾	116¼	106½	333½
151 ,, 200	66¼	62¾	57¾	186¾
201 ,, 250	38	24½	27½	90
251 ,, 300	50¼	45½	46	141¾
301 ,, level	519¾	489¾	407	1,416½
Total........	1,180½	1,150¼	1013	3,343¾

COST OF CONSTRUCTION.

The cost of construction of the various branches of the railway systems to the 30th June, 1906, is set forth in the following table. The average cost of the whole of the lines is calculated to be £10,688 per mile, including all charges, except those for rolling-stock, machinery, furniture, and workshops—an amount which, considering the character of some parts of the country through which the lines have been carried, and the cost of labour, which is considerably greater in Australia than in most other countries, is by no means a high one. In considering in detail the figures given, it is interesting to note the comparatively low cost per mile of some of the extensions through pastoral country. These are what is termed the "pioneer" class, and are of a light and cheap kind, on which the produce of the settlers may be conveyed to the trunk lines at a reasonable speed, and at a cheaper rate than carriage by road. The line from Parkes to Condobolin averaged £1,986 per mile; Jerilderie to Berrigan, £2,144 per mile; that from Dubbo to Coonamble, £2,384 per mile; that from Narrabri to Moree, £2,567 per mile; that from Berrigan to Finley, £2,598 per mile; and that from Byrock to

Brewarrina, £2,684 per mile. The lines of the "pioneer" class, in a special manner, show that in certain districts of the State, railways capable of effectively carrying the traffic can be constructed at an average cost far below what had been previously attempted. In support of this it is pointed out that eighteen lines, with a total length of 848¼ miles, have been constructed at an average cost of £3,116 per mile.

Lines opened for Traffic.	Length.	Total Cost.	Cost per Mile.
	m. ch.	£	£
Darling Harbour Branch	1 42½	808,025	527,690
Sydney to Granville	15 62	1,939,685	122,960
Granville to Goulburn	123 27½	2,549,772	20,672
Goulburn to Wagga	178 59¼	1,628,290	9,110
Wagga to Wodonga	79 17¾	914,787	11,547
Junee to Hay	168 19½	979,150	5,820
Narrandera to Jerilderie	65 14	408,646	6,270
Granville to Penrith	19 67	608,074	30,653
Penrith to Bathurst	111 71½	2,706,247	24,186
Bathurst to Dubbo	137 67	1,328,276	9,637
Dubbo to Bourke	225 51¼	1,358,435	6,020
Wallerawang to Mudgee	85 17½	978,501	11,482
Blacktown to Richmond	16 19¼	177,057	10,900
Goulburn to Cooma	130 43¾	1,382,334	10,589
Cootamundra to Gundagai	33 55½	323,345	9,597
Orange to Molong	23 26	268,817	11,525
Murrumburrah to Blayney	110 30	1,083,887	9,820
Sydney to Kiama	72 35¼	2,000,405	27,615
Homebush to Waratah	95 39	2,809,217	29,420
Newcastle to Wallangarra	393 23½	5,062,996	12,873
Werris Creek to Narrabri	99 6¼	584,471	5,899
Bullock Island Branch	1 53¼	395,211	237,275
Morpeth Branch	3 38½	61,482	17,661
Hornsby to Milson's Point	13 24	647,691	48,699
Campbelltown to Camden	7 66½	45,441	5,803
Kiama to Nowra	22 46¾	361,051	15,987
Lismore to Murwillumbah	63 59	906,598	14,224
Sydenham to Belmore	5 3	191,073	37,930
Culcairn to Corowa	47 72¾	217,986	4,550
Nyngan to Cobar	81 29	303,110	3,725
Cootamundra to Temora	38 28½	180,553	4,707
Molong to Forbes	72 76¾	379,997	5,208
Yass Tramway	2 73	29,230	10,036
Jerilderie to Berrigan	21 66	46,796	2,144
Parkes to Condobolin	62 65	124,737	1,986
Narrabri to Moree	60 00	154,044	2,567
Nevertire to Warren	12 54¼	40,864	3,223
Berrigan to Finley	14 4	36,505	2,598
Tarrawingee Tramway	40 7	32,388	808
Tamworth to Manilla	29 72¾	85,724	2,866
Moree to Inverell	95 65¼	312,191	3,258
Koorawatha to Grenfell	32 13¼	108,915	3,386
Clyde to Carlingford	4 39¼	33,491	7,458
The Rock to Lockhart	24 52½	77,407	3,139
Byrock to Brewarrina	58 34	156,802	2,684
Goulburn to Crookwell	36 6	159,123	4,411
Cobar to The Peak	3 54¼	15,578	4,235
Culcairn to Germanton ,...........	16 61	58,900	3,514
Dubbo to Coonamble	95 69	228,558	2,384
Gundagai to Tumut	31 34½	199,849	6,358
Lismore to Casino	18 14¾	128,158	7,048
Temora to Wyalong	41 26½	118,018	2,855
Narrabri West to Burren Junct.	51 56¼	148,897	2,880
Burren Junction to Cryon	22 70¼	67,433	2,947
Grafton to Casino	67 15¼	284,995	4,241
Total or average	3,390 7¾	36,239,213	10,688

The amount expended on rolling-stock to the 30th June, 1906, was £5,749,458; for machinery, £368,500; on workshops, £658,856; for furniture, £10,036; and Store Advance Account, £600,000; or £7,386,850 in all. This makes the total cost of all lines open for traffic £43,626,063, or an average of £12,869 per mile. The growth of the capital expenditure on lines open may be seen in the following table:—

Year.	Capital expended on lines open.	Year.	Capital expended on lines open.
	£		£
1855	515,347	1893	34,657,571
1860	1,422,672	1894	35,855,271
1865	2,746,373	1895	36,611,366
1870	5,566,092	1896	36,852,194
1875	7,245,379	1897	37,369,205
1880	11,778,819	1898	37,719,402
1885	21,831,276	1899	37,992,276
1886	24,071,454	1900	38,477,269
1887	26,532,122	1901	38,932,781
1888	27,722,748	1902	40,565,073
1889	29,839,167	1903	41,654,977
1890	30,555,123	1904	42,288,517
1891	31,768,617	1905	43,062,550
1892	33,312,608	1906	43,626,063

A reference to previous pages shows that the number of miles of line open for traffic on the 30th June, 1906, was 3,390, while the capital cost during the year increased by the sum of £563,513.

Of the £43,626,063 expended on lines open for traffic on the 30th June, 1906, an amount of £433,109 has been provided from the Consolidated Revenue of the State, leaving a balance of £43,192,954, which has been raised by the issue of debentures and other stock. It is indicated later on that the net revenue for the year ended 30th June, 1906, after paying working expenses, was £1,926,407, which gave a return of 4·42 per cent. upon the total capital expenditure on the lines open for traffic, and 4·46 per cent. upon the capital on which the country has to pay interest. The reduction of the railway debt is, however, purely imaginary, seeing that the bulk of the debentures retired were renewed out of fresh loans, and the amount paid from revenue to redeem loans was not furnished by railway profits. A sum of £1,000,000 was appropriated by Parliament in connection with the improvements to the grades on the main lines, and the quadrupling of the suburban system. The cost of these urgent works was to be defrayed from the proceeds of loans on the understanding that the loans would be redeemed from railway revenue at the rate of £75,000 a year. This redemption however, has been practically effected at the expense of the general revenue, seeing that only in two years when the redemption was made was there sufficient railway revenue to meet working expenses and interest, and there has, therefore, really been no reduction of capital effected by these payments.

The cost of railway construction in the principal countries of the world for which the information is available is shown in the following table. It would, however, be hardly fair to institute a comparison between the cost of construction per mile in New South Wales and in the densely-populated countries of Europe, for while in Europe the resumption of valuable ground is perhaps the heaviest expense in connection with the building of railways, in this State this item of expenditure is not of leading importance. The figures include the whole expense of equipping the lines for traffic, and are brought down to the latest available dates :—

Countries.	Cost per Mile open for Traffic.	Countries.	Cost per Mile open for Traffic.
	£		£
United Kingdom	56,156	Argentine	9,551
France	28,112	Japan	8,535
Germany	20,074	Australasia :—	
Switzerland	20,651	New South Wales	12,869
Belgium	34,278	Victoria	12,191
Norway	7,888	Queensland	6,965
Sweden	5,741	South Australia	7,822
Canada	12,565	Western Australia	6,120
United States	13,640	Tasmania	8,500
Cape Colony	10,399	New Zealand	9,347

Revenue Returns and Working Expenses.

The contrast between the present condition of the railways of New South Wales and their humble beginning in 1855 is a remarkable one. For the first ten years of the period under review the larger part of the railway earnings was obtained from the passenger traffic, no doubt owing to the fact that the first railways were almost entirely suburban. It was not until the line crossed the mountains and opened up the far interior that the proportions changed, and the goods traffic became the principal source of revenue of the railways. This change began to take place in 1867.

A comparison between the earnings of the period prior to 1871—when the net result every year represented only a small portion of the interest due on the capital expended in the construction of the lines—and of the subsequent period, affords matter for satisfaction. The following table shows the gross earnings, working expenses, and the proportion of the expenditure to receipts, in suitable periods from 1855 up to the 30th June, 1906. It must, however, be borne in mind that since the year 1887 the railway accounts have been made up to the 30th June in each year :—

Year.	Gross Earnings.	Working Expenses.	Proportion of working expenses to gross earnings.	Year.	Gross Earnings.	Working Expenses.	Proportion of working expenses to gross earnings.
	£	£	per cent.		£	£	per cent.
1855	9,249	5,959	64·4	1893	2,927,156	1,738,516	59·4
1860	62,269	50,427	81·0	1894	2,813,541	1,591,842	56·6
1865	166,032	108,926	65·6	1895	2,878,204	1,567,589	54·5
1870	307,142	206,003	67·1	1896	2,820,417	1,551,888	55·0
1875	614,648	296,174	48·2	1897	3,014,742	1,601,218	53·1
1880	1,161,017	647,719	55·8	1898	3,026,748	1,614,605	53·3
1885	2,174,368	1,458,153	67·1	1899	3,145,273	1,690,442	53·7
1886	2,160,070	1,492,992	69·1	1900	3,163,572	1,769,520	55·9
1887	2,208,295	1,457,760	66·0	1901	3,573,779	2,043,201	57·2
1888	2,295,124	1,530,551	66·7	1902	3,668,686	2,267,369	61·8
1889	2,538,477	1,634,602	64·4	1903	3,314,893	2,266,299	68·4
1890	2,633,086	1,665,835	63·3	1904	3,436,413	2,258,940	65·7
1891	2,974,421	1,831,371	61·6	1905	3,684,016	2,192,147	59·5
1892	3,107,296	1,914,252	61·6	1906	4,234,791	2,308,384	54·5

In the foregoing table is shown the progress of the railways of the State over a period of fifty years, and it will be observed that, with the exception of the years 1902, 1903, and 1904 (the drought years), the proportion of working expenses to gross earnings was considerably less than for the period anterior to the vesting of the railways in the Commissioners. The fact that the lines as a whole have not in the past returned a profit should occasion no surprise, as the statistics of railways in all parts of the world show that few lines, except perhaps suburban ones, return anything like a profit during the first few years after their opening. In England a period of seven years has been allowed by good authorities for a line to develop traffic; and if such is the fact in more densely-populated countries, whose resources are more developed than is the case in New South Wales, there is every reason to be satisfied with the fact that the lines of this State have yielded so good a return as the figures show.

A reference to the table showing the net earnings and the interest on the capital expended upon railways, which will be found on page 170, discloses the fact that during the period from 1870 to 1875, when the length of new lines yearly constructed was very small, the railway profits steadily increased from 1·81 to 4·39 per cent. During 1877 and 1878, 180 miles of railway were constructed, and the profits immediately declined to 3·74 and 3·34 per cent., respectively. From 1880 to 1884 the railways were extended, chiefly to centres already populous and prosperous, viz., Riverina and New England, and the central districts of Wellington and Dubbo; and as these were years of remarkable prosperity, the railway profits suffered less than usual from the considerable extension, which included the construction of the expensive connecting link joining the New South Wales railways with those of Victoria, at the River Murray. From 1885 the extensions on the main lines have, for the most part, been through pastoral country, such as the continuation of the Western line to Bourke, the Northern line to Jennings, and the further extensions of the lines on the Goulburn district to the rich pastoral lands of Monaro; while several branch lines were constructed tapping important agricultural, dairy-farming, and pastoral districts, notably the lines, Cootamundra to Gundagai and Tumut, Cootamundra to Temora and Wyalong, Murrumburrah to Blayney, Nyngan to Cobar, Culcairn to Corowa, Sydney to Nowra, Narrandera to Jerilderie, Berrigan to Finley, Orange to Molong, Parkes, Forbes, and Condobolin, Nevertire to Warren, Koorawatha to Grenfell, The Rock to Lockhart, Byrock to Brewarrina, Tamworth to Manilla, Narrabri to Moree and Inverell, Goulburn to Crookwell, Culcairn to Germanton, and Narrabri West to Cryon. With the exception of the Cootamundra to Temora, Nyngan to Cobar, and Tamworth to Manilla sections none of the lines mentioned paid its way during the past year—the loss on some being very heavy. An isolated line, 149 miles 9 chains in length, from Murwillumbah through Lismore and Casino to Grafton was constructed, which, likewise, shows a heavy loss on working. In some cases the value of the branch lines will not be felt until the entire system of which they form part is completed, or until they become trunk lines. For instance, a proposal has been under consideration for continuing the Goulburn to Cooma line to the Victorian border, with a branch to Eden at Twofold Bay. It is expected that the Gippsland line will be extended from Bairnsdale to the border, and that by the junction of these two lines an alternative route to Melbourne will be obtained. In that case, no doubt, the eastern part of Gippsland would find its natural port at Eden. Expensive new lines result in an increase in the percentage of working expenses to the gross earnings, as these lines have to be kept in full working order and repair whilst actually returning in gross earnings little more than the cost of maintenance. The small returns on expensive incompleted branches further tend to diminish greatly the profits of the railway system taken as a whole; but such is the history of railway construction in all parts of the world, and New South Wales is no exception to the general rule. The financial depression of 1893, which brought about a great change in the character of the coaching traffic, and the continued unfavourable character of the seasons adversely affected the earnings of several years. The increased cost of fuel and liberal advances granted to the wages staff materially assisted to augment the working expenses, while the carriage of fodder and the transfer of live-stock during drought years, at rates that were almost unremunerative, contributed greatly towards an increase in the proportion of working expenses to gross earnings.

The following table shows the loss on non-paying lines during the last four calendar years, and in the case of two new lines for the year ended 30th June, 1906. It should be noted that the capital cost includes the expenditure on equipment as well as construction :—

Line.	Length.		Capital Cost.	Loss in Working, after providing for Working Expenses and Interest.			
				1902.	1903.	1904.	1905.
Year ended 31st December.							
	mls.	ch.	£	£	£	£	£
Sydenham to Belmore	5	3	211,007	6,760	6,423	6,268	5,542
Sydney to Kiama	72	35¼	2,225,837	27,654	23,580	12,135	22,778
Kiama to Nowra	22	46¾	378,528	10,880	10,759	10,877	12,914
Goulburn to Cooma	130	40¾	1,441,529	32,687	38,820	42,676	41,018
Demondrille to Blayney	110	30	1,147,085	35,116	39,129	39,320	36,030
Cootamundra to Temora	38	28½	180,553	1,672	2,382	502	......
Cootamundra to Gundagai	33	55½	337,732	4,576	6,448	8,304	6,982
Gundagai to Tumut	31	34½	216,558	......	...	6,445	5,849
Junee to Hay	168	19½	1,071,448	16,772	58,513	51,049	23,643
Narrandera to Jerilderie	65	14	423,596	10,180	11,972	11,071	9,722
Jerilderie to Finley	35	70	107,641	2,232	2,704	2,296	2,667
Culcairn to Corowa	47	72¾	239,339	6,459	6,312	6,717	6,757
Blacktown to Richmond	16	19¼	198,079	4,419	5,203	4,558	3,926
Wallerawang to Mudgee	85	17½	1,040,531	29,591	30,892	29,509	19,805
Orange to Forbes	96	22¾	701,789	6,541	11,476	6,030	3,007
Parkes to Condobolin	62	65	144,662	......	1,773	2,103	1,236
Nevertire to Warren	12	54¼	51,589	1,547	1,851	2,021	2,243
Nyngan to Bourke	126	43	734,155	18,267	15,907	11,644	14,598
Nyngan to Cobar and The Peak	85	3¼	318,688	8,180	2,754	......	......
Hornsby to Milson's Point	13	24	696,975	13,330	10,813	8,524	3,130
Werris Creek to Tamworth	27	40	300,996	1,940	4,264	938	......
Tamworth to Armidale	76	77	1,207,121	21,008	30,297	24,297	21,382
Armidale to Jennings	132	74¾	1,536,532	49,192	52,973	50,145	42,196
West Tamworth to Manilla	29	72¾	85,724	717	1,839	466	......
Werris Creek to Narrabri	99	6¼	584,471	19,345	1,851	......	......
Moree to Inverell	95	65¼	334,671	666	5,431	6,747	1,623
Lismore to Murwillumbah	63	59	926,940	26,441	24,390	24,789	23,745
Lismore to Casino	18	14¾	134,815	......	......	5,946	5,025
Koorawatha to Grenfell	32	13¼	127,722	2,635	3,363	2,525	2,274
The Rock to Lockhart	24	52½	94,039	2,165	2,757	1,764	1,718
Clyde to Carlingford	4	39¼	40,653	3,381	3,901	3,911	4,091
Byrock to Brewarrina	58	34	178,117	4,373	6,137	4,916	3,526
Goulburn to Crookwell	36	6	177,376	......	3,400	3,009	3,158
Culcairn to Germanton	16	61	69,202	......	2,525	2,165	1,926
	1,976	35½	17,665,700	368,926	430,839	393,667	332,511
New Lines.	Year ended 30th June.						1906.
Burren Junction to Cryon	22	70¼	85,765	......	......	......	2,343
Grafton to Casino	67	15¼	308,780	......	......	......	4,978
	90	5½	394,545	......	......	......	7,321

The Railway Commissioners in their annual report for 1891 suggested a plan of paying for new lines from the sale of lands. They recommended that the Crown lands for a distance of 10 miles on each side of a proposed line of railway should be set aside for sale, and half the proceeds of the land sold credited to the railway capital; and where the land required for railway construction had passed into the hands of private individuals, the land-owners should combine and convey the necessary land free of cost to the Government, it being considered that the owners would be fully remunerated for the gift of the land by the enhanced value of their property caused by the establishment of direct railway communication with the other parts of the State. By the adoption of such a system as this it is believed that railways in light undulating country could be constructed at a moderate cost, and yield a fair return on capital from the commencement.

The betterment system as applied to railways was first introduced in the construction of the Culcairn to Corowa railway. No special Act was passed for the general establishment of this principle; but by a proviso in a clause of the Public Works Act the Government was empowered to apply the principle to all railways constructed subsequent to the date of the passing of the Act. In estimating the enhanced value of the land adjoining the Culcairn to Corowa railway line, the stations were assumed to be 10 miles apart, the betterment area having a 5-mile radius from each station, and the land in the vicinity of each station being considered to have an enhanced value of 25 per cent., graduating to 5 per cent. at the limit of the radius. In the case of the extension of the railway along the southern coast it is found that the enhanced value does not reach so high a percentage, owing to the facilities which exist for the transport of produce by water.

The following table gives the percentage of earnings from the two sources of railway revenue. It will be observed that in the year 1860 the earnings from passenger traffic largely exceeded those from goods, but after that year the proportion derived from coaching traffic declined, reaching the minimum in 1875. This falling-off was almost entirely due to the considerable extension of the main lines through pastoral country, thinly populated, but well stocked with sheep and cattle, and consequently furnishing the railways with large quantities of produce for carriage to the sea-board. From 1880 to 1889, however, the percentage of receipts from coaching traffic steadily advanced, the proportion in the year last named being as high as 40·4 per cent. of the total revenue. A marked increase is exhibited in the figures for the years 1903, 1904, and 1905, but there was a falling-off in 1906; the intermediate years showing slight variations:—

Year.	Percentage of—		Year.	Percentage of—	
	Coaching Traffic to Total.	Goods Traffic to Total.		Coaching Traffic to Total.	Goods Traffic to Total.
1860	73·0	27·0	1894	37·2	62·8
1865	56·0	44·0	1895	35·1	64·9
1870	38·4	61·6	1896	37·0	63·0
1875	33·5	66·5	1897	36·4	63·6
1880	33·6	66·4	1898	37·2	62·8
1885	38·2	61·8	1899	36·8	63·2
1886	39·3	60·7	1900	38·2	61·8
1887	38·5	61·5	1901	38·6	61·4
1888	40·1	59·9	1902	38·3	61·7
1889	40·4	59·6	1903	42·4	57·6
1890	40·2	59·8	1904	42·0	58·0
1891	39·6	60·4	1905	39·9	60·1
1892	38·3	61·7	1906	37·9	62·1
1893	38·1	61·9			

In the subjoined table an analysis is presented of the working expenses of the State railways for the decennial period ended 30th June, 1906, the total expenses as well as the expenses per train mile and per mile of line open to traffic also being given. It will be observed that there has been a general reduction in the expenditure per train mile with the exception of the year ended June, 1904, and this reduction is indicated in all the details included in the total, with the exception of the expenditure upon locomotive power and rolling-stock repairs and renewals, which has necessarily increased during the ten years. An inspection of the table reveals a condition of affairs that is fairly satisfactory in regard to working expenses generally. In 1888, when the Commissioners assumed the control of the railways, large renewals of rolling-stock were needed, while additional expenditure had to be incurred on permanent way and buildings. The lines were placed in thorough working order by the year 1896, and have been so maintained since that date. The rolling-stock has been very greatly improved; the tractive power of the engines has been increased, and types of locomotives adapted to the special and general needs of the traffic introduced:—

Year ended 30th June.	Maintenance of Way, Works, and Buildings.	Loco-motive Power.	Carriage and Waggon Repairs and Renewals.	Traffic Expenses.	Compensation.	Pensions and Gratuities.	General Charges.	Total.
	£	£	£	£	£	£	£	£
1897	358,057	574,255	152,885	444,857	2,894	5,203	63,067	1,601,218
1898	353,969	597,455	139,161	455,545	3,296	4,504	60,675	1,614,605
1899	370,197	635,145	141,942	471,532	5,451	2,652	63,523	1,690,442
1900	409,128	645,842	171,271	473,347	4,164	4,250	61,518	1,769,520
1901	484.750	761,625	174,478	537,227	11,111	4,764	69,246	2,043,201
1902	521,983	875,582	184,232	588,938	20,234	6,296	70,104	2,267,369
1903	486,596	925,584	164,245	605,210	7,070	8,126	69,468	2,266,299
1904	519,389	870,970	183,198	601,634	5,750	6,708	71,291	2,258,940
1905	491,164	843,926	179,625	596,313	5,429	7,329	68,361	2,192,147
1906	539,700	876,804	180,132	631,388	4,845	8,188	67,327	2,308,384

PER TRAIN MILE.

Year ended 30th June.	Maintenance of Way, Works, and Buildings.	Loco-motive Power.	Carriage and Waggon Repairs and Renewals.	Traffic Expenses.	Compensation.	Pensions and Gratuities.	General Charges.	Total.
	d.	d.	d.	d.	d.	d.	d.	d.
1897	10·57	16·95	4·51	13·13	·09	·15	1·86	47·26
1898	10·18	17·19	4·00	13·11	·10	·13	1·75	46·46
1899	10·09	17·32	3·87	12·85	·14	·07	1·73	46·07
1900	11·04	17·43	4·62	12·77	·12	·11	1·66	47·75
1901	10·81	16·98	3·89	11·98	·25	·10	1·55	45·56
1902	10·75	18·04	3·79	12·13	·42	·13	1·45	46·71
1903	10·11	19·23	3·41	12·58	·15	·17	1·45	47·10
1904	11·99	20·10	4·23	13·88	·13	·15	1·65	52·13
1905	11·26	19·35	4·12	13·67	·12	·17	1·57	50·26
1906	10·92	17·74	3·64	12·77	·09	·17	1·37	46·70

PER MILE OPEN.

Year ended 30th June.	Maintenance of Way, Works, and Buildings.	Loco-motive Power.	Carriage and Waggon Repairs and Renewals.	Traffic Expenses.	Compensation.	Pensions and Gratuities.	General Charges.	Total.
	£	£	£	£	£	£	£	£
1897	139·0	223·0	59·4	172·7	1·1	2·0	24·5	621·7
1898	133·1	224·7	52·3	171·3	1·3	1·7	22·8	607·2
1899	136·9	234·9	52·5	174·4	2·0	1·0	23·5	625·2
1900	149·1	235·4	62·4	172·5	1·5	1·5	22·4	644·8
1901	174·5	274·2	62·8	193·2	4.1	1·7	25·0	735·5
1902	179.2	300·6	63·2	202·2	6·9	2·2	24·1	778·4
1903	160·4	305·1	54·1	199·5	2·4	2·7	22·8	747·0
1904	163·1	273·5	57·5	189·0	1·9	2·1	22·4	709·5
1905	149·7	257·2	54·8	181·7	1·7	2·2	20·9	668·2
1906	160·3	260·4	53·5	187·6	1·5	2·4	20·0	685·7

NET EARNINGS AND INTEREST ON CAPITAL.

The net revenue for the year ended 30th June, 1906, was £1,926,407; while the capital expended on lines open for traffic to that date was £43,626,063. The amount, thus available, to meet the interest charges on the capital expended represents a return of 4·42 per cent., which is 0·86 per cent. in excess of the nominal interest payable on the public debt. In establishing the financial results of the working of the lines it is the practice of railway authorities to compare the net returns with the nominal rate of interest payable on the railway loans or on the public debt of the State. An accurate comparison, however, can only be made by taking the average rate of interest payable on the actual sum obtained by the State for its outstanding loans, inasmuch as many loans were floated below par. On this basis, the lines of the State have met the interest on construction and equipment during six years only, viz., 1881, 1882, 1883, 1899, 1901, and 1906. The following table shows the net earnings and the interest returned on the total capital expended on railways. including the cost of both construction and equipment for the year 1855 and subsequent periods:—

Year.	Net Earnings.	Interest on Capital.	Year.	Net Earnings.	Interest on Capital.
	£	per cent.		£	per cent.
1855	3,290	0·63	1893	1,188,540	3·48
1860	11,842	0·83	1894	1,221,699	3·46
1865	57,106	2·07	1895	1,310,615	3·60
1870	101,139	1·81	1896	1,268,529	3·44
1875	318,474	4·39	1897	1,413,524	3·79
1880	513,298	4·35	1898	1,412,143	3·75
1885	716,215	3·37	1899	1,454,831	3·83
1886	667,078	2·90	1900	1,394,052	3·63
1887	750,535	2·96	1901	1,530,578	3·94
1888	764,573	2·85	1902	1,401,317	3·48
1889	903,875	3·14	1903	1,048,594	2·53
1890	967,251	3·17	1904	1,177,473	2·80
1891	1,143,050	3·59	1905	1,491,869	3·46
1892	1,193,044	3·58	1906	1,926,407	4·42

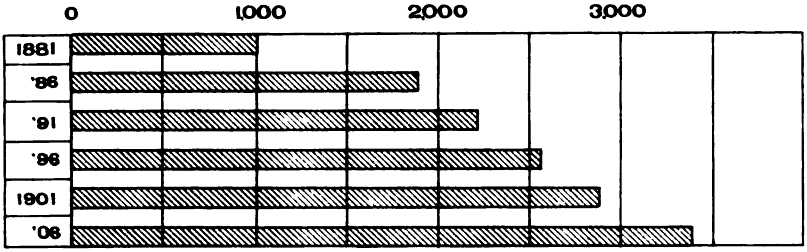
The table given below shows the rate of interest returned on the capital expenditure for each of the last ten years, with the sum by which such return falls short of the actual rate of interest payable on the cost of construction. The rate of return on capital represents the interest on the gross cost of the lines. The nominal amount of outstanding debentures and funded stock is less than the actual expenditure on construction and equipment, owing to the fact, as previously stated, that some loans have been redeemed; but as the redemption has been effected by means of fresh loans charged to general services, or by payments from the general revenue, and not out of railway earnings, no allowance on this account can reasonably be claimed:—

Year.	Interest returned on Capital.	Actual rate of Interest payable on Outstanding Loans.	Average Loss.
	per cent.	per cent.	per cent.
1897	3·79	3·81	0·02
1898	3·75	3·78	0·03
1899	3·83	3·75	*0·08
1900	3·63	3·76	0·13
1901	3·94	3·74	*0·20
1902	3·48	3·68	0·20
1903	2·53	3·67	1·14
1904	2·80	3·68	0·88
1905	3·46	3·69	0·23
1906	4·42	3·68	*0·74

* Average gain.

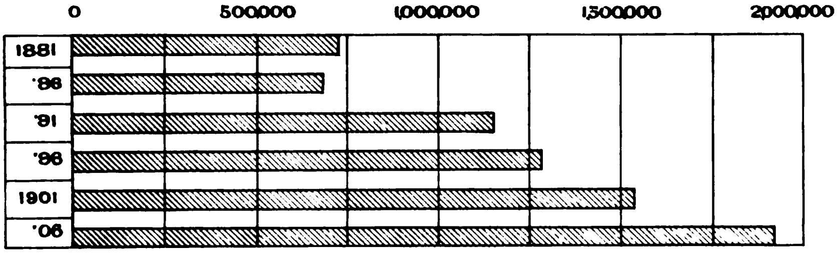
STATE RAILWAYS

Miles of Railway in Operation



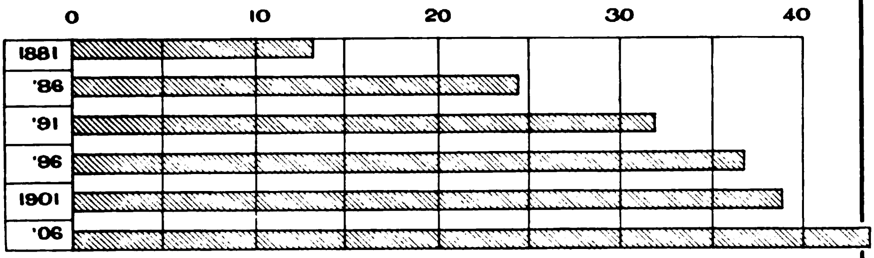
Earnings after paying Working Expenses

(in pounds sterling)



Capital expended on Lines open

(in million pounds sterling)



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As pointed out previously the extension of the lines in sparsely populated districts was responsible for a considerable falling off in profits for some years. In any consideration of the financial position of the railways the fact must not be lost sight of that there are thirty-one branch lines, on which £16,589,813 have been expended, which entail an annual loss in working of about £340,000. Generally speaking, however, the above returns give evidence of considerable improvement during the period; this satisfactory state of affairs resulting from careful and economical management. The falling-off noticeable in 1903 and 1904 was, in a great measure, due to the disastrous drought which afflicted a great portion of the State. During those years not only was there a much smaller volume of traffic than usual, but the Commissioners carried starving stock and fodder at rates barely sufficient to cover working expenses.

It has been customary in past years to deduce the growth in railway traffic from a comparison of the increase in earnings, but a little reflection will show that this is not altogether a fair test. In some periods the earnings have failed to show expansion, not because the traffic was poor, but mainly from the fact that owing to reduced passenger and freight rates the railways had necessarily to transact a large volume of business to obtain the same or even smaller receipts than in previous years. It is only quite recently that the number of tons carried one mile has been ascertained with reference to the goods traffic, while the requisite particulars for obtaining a proper comparative test of the growth of passenger traffic are not yet available.

Earnings and Expenses per Mile.

Two important facts which demonstrate the financial position of the railways and the character of the management are the earnings per train mile and per average mile open. Although the returns now being realised cannot be compared with those of 1875, when the net earnings per train mile fell a little short of 52d., and per mile open of £776, the earnings, with the exception of those for the years 1902, 1903, and 1904 are in every way encouraging. The falling-off in 1902 was largely due to the increased volume of traffic carried at exceptionally low rates, the average revenue derived from all descriptions of merchandise and live stock traffic, exclusive of terminal charges, having decreased from 1·13d. to 1·07d. per ton per mile. Under the control of the Commissioners the net return per train mile during that year was increased from 27·4d. to 28·9d., or 5·5 per cent.; while per mile of line open for traffic the advance has been from £374 to £481, or 28·6 per cent. During the year ended 30th June, 1903, the adverse circumstances already alluded to brought about a considerable reduction, and the net earnings per train mile fell to 21·79d., and per mile open for traffic to £346. While the results for 1904 show an improvement on those of the previous year, the net earnings per train mile having increased to 27·17d., and per mile open for traffic to £370, there is a substantial decrease in the tonnage of general merchandise, wool, and live stock, thus showing that the recent disastrous seasons were still adversely affecting the traffic. The transactions of the year just closed show a marked improvement over those of the preceding six years in respect of the net earnings per train mile, and over every year since 1880 in regard to the net earnings per average mile open. With the exception of minerals, other than coal and coke, and grain and flour, all classes of traffic contributed to the improved result. The gross earnings, expenditure, and net earnings per train mile and per average mile open since 1860 are set forth in the following table:—

Year.	Per train mile.			Per average mile open.		
	Gross Earnings.	Expenditure.	Net Earnings.	Gross Earnings.	Expenditure.	Net Earnings.
	d.	d.	d.	£	£	£
1860	83·37	67·52	15·85	889	720	169
1865	82·42	54·07	28·35	1,161	762	399
1870	81·81	54·86	26·95	907	608	299
1875	100·20	48·28	51·92	1,499	722	776
1880	86·02	47·99	38·03	1,475	823	652
1885	78·61	52·72	25·89	1,307	877	430
1886	80·01	55·30	24·71	1,207	834	373
1887	81·88	54·05	27·83	1,141	753	388
1888	82·34	54·91	27·43	1,123	749	374
1889	79·72	51·34	28·38	1,192	768	424
1890	78·90	49·91	28·99	1,209	765	444
1891	84·88	52·26	32·62	1,363	839	524
1892	89·25	54·98	34·27	1,423	877	546
1893	93·60	55·59	38·01	1,264	750	514
1894	94·18	53·29	40·89	1,159	656	503
1895	90·96	49·54	41·42	1,144	623	521
1896	87·68	48·24	39·44	1,114	613	501
1897	88·99	47·26	41·73	1,171	622	549
1898	87·10	46·46	40·64	1,138	607	531
1899	85·72	46·07	39·65	1,163	625	538
1900	85·36	47·75	37·61	1,153	645	508
1901	79·68	45·56	34·12	1,286	735	551
1902	75·58	46·71	28·87	1,259	778	481
1903	68·89	47·10	21·79	1,093	747	346
1904	79·30	52·13	27·17	1,079	709	370
1905	84·46	50·26	34·20	1,123	668	455
1906	85·67	46·70	38·97	1,258	686	572

In many cases the railways of the State pass through heavy and mountainous country, involving steep gradients, some of the worst of which are situated on the trunk lines. For the more expeditious and economical working of the traffic, important deviations have been made and are being carried out to secure better grades and to ease the curves. In the Southern system, the line at Cooma reaches an altitude of 2,659 feet above the sea-level; in the Western, at Clarence Station, Blue Mountains, a height of 3,658 feet is attained; while on the Northern line the highest point, 4,471 feet, is reached at Ben Lomond. In no other State of the Commonwealth or New Zealand do the lines attain such an altitude. In Queensland, the maximum height is 3,008 feet; in Victoria, 2,452 feet; in South Australia, 2,024 feet; in Western Australia, 1,522 feet, and in New Zealand, 1,252 feet. Where heavy gradients prevail, the working expenditure must necessarily be heavier than in the States where the surface configuration is more level.

AVERAGE WEIGHT OF TRAIN LOAD.

The success or otherwise of railway management is more or less clearly reflected in the returns of goods and passenger mileage, as well as in goods and passenger train loads. Making due allowance for exceptional circumstances, it may be regarded as axiomatic that careful attention to the question of loads will result in effective reduction of mileage cost. With a falling-off in running expenses a reduction in rates becomes practicable, and this will be followed naturally by an increase in traffic. Low train loads, except under special circumstances, are an infallible reflex of unscientific management, and where the defect is not remedied the system is foredoomed to failure, for low train loads mean high train mileage. Railway working expenses are proportionate not so much to the actual volume of traffic carried as to the mileage over which such traffic has to pass. An unduly high mileage means waste of capital and revenue, with the natural corollary of high rates and fares and restricted traffic, with consequent loss to both the public and private purse. American railway managers have realised the economy of moving traffic in as few trains and waggons as practicable. On the Indian railways the principle has been adopted to the extent of increasing the train load, but the importance of large capacity waggons has not yet been sufficiently grasped. It is only in recent years that Great Britain and the States of New South Wales and South Australia have awakened to the importance of this aspect of railway management, and as a consequence little or no improvement in their returns of loading has been effected.

As touching the question of weight of train load it may be stated that in 1901 the directorate of the North-Eastern Railway came to the conclusion that the maximum amount of efficiency was not obtained under the practical and clerical methods of procedure up till then in vogue. They, therefore, decided upon a reorganisation of their staff, and gave orders that detailed information was to be compiled on the same lines as those obtaining in the United States. The advantages of the change were soon clearly recognised. From 1870 up to 1900 English freight trains were not any more heavily loaded than when the railway system was in its infancy, but in the short period of five years the North-Eastern increased the loading of its freight trains from 67·79 to 102·77 tons, thereby curtailing its freight train mileage by 31·8 per cent. This was accomplished in four ways—first, money was lavishly spent on strengthening the roadway, so that very heavy trains could be run with safety and without damaging the track; secondly, the waggons were more fully loaded, and engines were graded up to their capacity; thirdly, the capacity of both waggons and engines was greatly increased; and, lastly, as large a percentage as possible of the profits was set aside for these purposes.

In the subjoined statement the figures, which relate to this State, with the exception of those for the years 1900 to 1906 inclusive, are unsatisfactory, inasmuch as the goods mileage relates to the year ended 30th June, while the ton mileage is for the year ended 31st December following. There are no returns for 1899:—

Year.	Goods mileage.	Ton mileage.	Average weight of train.
			tons.
1896	4,001,164	255,621,932	63·9
1897	4,244,385	273,400,624	64·4
1898	4,260,368	314,996,969	73·9
1900	4,610,343	320,364,852	69·5
1901	5,836,587	404,740,360	69·4
1902	6,586,032	436,814,308	66·3
1903	6,405,756	399,578,918	62·4
1904	5,304,660	393,094,107	74·1
1905	5,431,974	437,416,250	80·5
1906	6,512,145	478,642,156	73·5

The average for the period 1900 to 1906 was 70·5 tons. The only other State in Australasia furnishing similar data is South Australia, and the following table indicates the particulars for the corresponding period. The average tonnage for goods trains is 88·35 tons, which is 7·8 tons higher than in New South Wales:—

Year.	Goods mileage.	Ton mileage.	Average weight of train.
			tons.
1896	2,089,911	134,846,696	64·52
1897	2,265,277	159,454,588	70·34
1898	2,273,537	157,143,651	69·11
1899	2,426,477	191,041,569	78·73
1900	2,569,958	197,079,956	76·68
1901	2,686,789	202,649,157	75·42
1902	2,468,326	170,523,167	69·08
1903	2,311,250	165,357,307	71·54
1904	2,247,003	178,443,372	79·41
1905	2,284,071	201,789,124	88·35

The figures for New South Wales and for South Australia compare very favourably with the returns of the British railways, but are very far behind those for the American and Canadian lines, as the following figures show :—

BRITISH RAILWAYS.

Year.	Goods mileage.	Ton mileage.	Average weight of train.
			tons.
1870	82,423,000	4,622,000,000	56·10
1880	116,908,000	7,006,215,000	59·93
1890	145,206,000	8,311,183,000	57·74
1899	178,579,000	10,307,520,000	57·71
1900	181,048,000	10,665,240,000	58·91
1901	173,951,000	10,486,954,000	60·26
1902	170,602,000	10,892,400,000	63·84
1903	160,803,000	11,099,057,000	69·02

The particulars for the Canadian Pacific Railway for the years 1901, 1902, and 1903 are as follows :—

Year.	Goods mileage.	Ton mileage.	Average weight of train.
			tons.
1901	10,415,831	2,383,633,945	228·85
1902	12,828,159	3,247,922,167	253·19
1903	14,280,435	3,862,242,993	270·46

The railways of the United States appear to great advantage compared with the British lines; the average weight of train for the last nine years available was :—

Year.	Goods mileage.	Ton mileage.	Average weight of train.
			tons.
1895	491,410,820	88,567,770,801	180·23
1896	497,248,296	93,885,853,634	188·81
1897	500,326,372	97,842,569,150	195·56
1898	542,824,509	114,566,173,191	211·06
1899	534,391,846	126,991,703,110	237·64
1900	513,667,388	141,162,109,413	274·81
1901	505,468,619	148,959,303,492	294·70
1902	508,210,140	156,624,166,024	308·19
1903	547,326,409	171,290,310,685	312·96

COACHING AND GOODS TRAFFIC.

Passenger Traffic.

The following table shows the number of passengers carried on the lines of the State, together with the receipts derived from the traffic, and the average receipts per journey since 1855 :—

Year.	Passenger Journeys.	Receipts from Coaching Traffic.	Average Receipts per Journey.
	No.	£	d.
1855	98,846	9,093	22·08
1860	551,044	45,428	19·79
1865	751,587	92,984	29·69
1870	776,707	117,854	36·42
1875	1,288,225	205,941	38·37
1880	5,440,138	390,149	17·21
1885	13,506,346	830,904	14·76
1886	14,881,604	849,253	13·70
1887	14,451,303	850,499	14·12
1888	15,174,115	918,975	14·53
1889	16,086,223	1,025,601	15·30
1890	17,071,945	1,059,791	14·90
1891	19,037,760	1,177,037	14·84
1892	19,918,916	1,189,231	14·33
1893	19,932,703	1,115,042	13·43
1894	19,265,732	1,047,029	13·04
1895	19,725,418	1,022,901	12·45
1896	21,005,048	1,043,922	11·93
1897	22,672,924	1,098,696	11·63
1898	23,233,206	1,126,257	11·63
1899	24,726,067	1,158,198	11·22
1900	26,486,873	1,227,355	11·12
1901	29,261,324	1,370,530	11·23
1902	30,885,214	1,403,744	10·91
1903	32,384,138	1,405,888	10·42
1904	33,792,689	1,442,733	10·27
1905	35,158,150	1,469,018	10·03
1906	37,500,531	1,604,349	10·07

It will be seen that since 1895 there has been a considerable increase in the number of passenger journeys over those of preceding years, but less satisfactory results have been secured as regards average receipts per journey. This does not so much arise from curtailment of long-distance travelling as from the change of a large body of travellers from first to second class—a result due to diminished means, and doubtless to some extent to the more comfortable carriages provided for second-class passengers. A return to prosperous times should show an increase in first-class passengers, but as frequently happens the removal of the original impelling cause has not been followed by a reversion to previous habits; so that the railways have not altogether recovered the revenue lost by the change on the part of the travelling public.

The number of journeys made by each person in the State now averages 25·1 per annum, as against 7·5 in 1880, and 1·6 in 1870. The increase has been exceedingly rapid as well as fairly uniform, as will be seen from the following table:—

Year.	Number of Journeys.	Year.	Number of Journeys.
1855	0·4	1893	16·7
1860	1·6	1894	15·9
1865	1·9	1895	15·9
1870	1·6	1896	16·6
1875	2·3	1897	17·7
1880	7·5	1898	17·8
1885	14·6	1899	18·7
1886	15·4	1900	19·7
1887	14·4	1901	21·4
1888	14·9	1902	22·1
1889	15·3	1903	22·8
1890	15·8	1904	23·4
1891	17·0	1905	24·1
1892	17·1	1906	25·1

The traffic on the suburban lines, which comprises only distances within 22 miles of Sydney and Newcastle, Liverpool and Morpeth included, has enormously increased of late years. In the following table a comparison is instituted between the traffic for the years ended 30th June, 1888, 1905, and 1906:—

Suburban Traffic.	1888.	1905.	1906.
Number of ordinary passengers	7,413,868	14,359,193	15,126,062
,, workmen's journeys	1,738,284	8,022,876	8,790,684
,, season ticket holders' journeys	3,227,760	8,798,700	9,430,500
Total passenger journeys	12,379,912	31,180,769	33,347,246
Number of miles travelled	70,172,793	188,067,952	206,540,068
Average mileage per passenger	5·67	6·03	6·19
Amount received from passengers	£186,393	£366,855	£391,957
Average receipts per mile, per passenger	0·64d.	0·47d.	0·46d.

The average receipts from passenger traffic per head of population advanced very rapidly until 1891, when the amount stood at 20s. 11·8d., against 10s. 8·5d. in 1880, and 4s. 9·7d. in 1870. This was not due so much to the increased distance travelled by passengers as to the fact that the railway mileage increased at a greater rate than the population, enabling the public to indulge in a larger measure of railway travelling, in accordance with the well established rule that the more the facilities for travelling are extended the greater will be the traffic. Subsequently to 1891 the average lessened for a few years. but it now stands at 21s. 5·4d. In this connection it may be interesting to note that the fares charged on the suburban lines, over which the majority of passengers travel, are very much less for both classes of travellers than the English rates, although the cost of working is considerably higher. The receipts from passenger traffic per head of the population will be found in the following figures :—

Year.	Amount per head.	Year.	Amount per head.
	s. d.		s. d.
1860	2 7·8	1894	17 2·9
1865	4 7·8	1895	16 6·1
1870	4 9·7	1896	16 6·5
1875	7 10·2	1897	17 2·2
1880	10 8·5	1898	17 3·6
1885	17 11·1	1899	17 5·7
1886	17 6·2	1900	17 9·5
1887	16 11·1	1901	20 3·8
1888	18 0·2	1902	20 1·4
1889	19 6·2	1903	19 10·0
1890	19 7·1	1904	19 10·0
1891	20 11·8	1905	20 1·2
1892	20 5·6	1906	21 5·4
1893	18 8·5		

Goods Traffic.

The following figures, which extend as far back as the first opening of the lines, show how greatly the goods traffic has expanded, especially in recent years :—

Year.	Tonnage of Goods and Live Stock.	Earnings.	Year.	Tonnage of Goods and Live Stock.	Earnings.
		£			£
1855	140	156	1893	3,773,843	1,812,014
1860	55,394	16,841	1894	3,493,919	1,766,512
1865	416,707	73,048	1895	4,075,093	1,855,303
1870	766,523	189,288	1896	3,953,575	1,776,495
1875	1,171,354	408,707	1897	4,567,041	1,916,046
1880	1,712,971	770,868	1898	4,630,564	1,900,491
1885	3,273,004	1,343,464	1899	5,248,320	1,987,075
1886	3,218,582	1,310,817	1900	5,531,511	1,936,217
1887	3,339,253	1,357,796	1901	6,398,227	2,203.249
1888	3,399,772	1,376,149	1902	6,467,552	2,264,942
1889	3,485,839	1,512,876	1903	6,596,241	1,909,005
1890	3,788,950	1,573,295	1904	6,656,759	1,993,680
1891	3,802,849	1,797.384	1905	6,724,215	2,214,998
1892	4,296,713	1,918,065	1906	7,629,492	2,630,442

The weight of goods and live stock carried per head of population in New South Wales compares favourably with that of many countries where railways have long been established. The average tonnage for 1860 and subsequent periods was :—

Year.	Tons.	Year.	Tons.
1860	0·2	1894	2·9
1865	1·2	1895	3·3
1870	1·6	1896	3·1
1875	2·2	1897	3·6
1880	2·4	1898	3·6
1885	3·5	1899	4·0
1886	3·3	1900	4·1
1887	3·3	1901	4·7
1888	3·3	1902	4·7
1889	3·3	1903	4·7
1890	3·5	1904	4·6
1891	3·4	1905	4·6
1892	3·7	1906	5·1
1893	3·2		

The largest amount of tonnage per inhabitant is carried in the United States where it averages 17·1; and the United Kingdom is second with 10·7 tons. The relative position of New South Wales will be seen from the next table, which shows the tonnage of merchandise carried per head of population in the principal countries of the world:—

	Tons.		Tons.
United States	17·1	Russia	1·1
United Kingdom	10·7	Portugal	0·7
Belgium	8·9	Japan	0·4
Germany	6·9	Australasia—	
Canada	9·0	New South Wales	5·1
Switzerland	3·6	Victoria	3·0
Austria-Hungary	3·7	Queensland	2·5
Sweden	4·2	South Australia	4·5
France	3·3	Western Australia	9·7
Netherlands	2·4	Tasmania	2·2
Norway	1·8	New Zealand	4·9

In the following statement, which relates to the year ended 30th June, 1906, will be found particulars of the tonnage under eighteen broad classes, the average distance goods of each class were carried, and the average earnings per ton per mile. This last figure, however, does not include the terminal charges, which would probably increase the revenue per ton per mile by about ·20d., or from 1·14d. to 1·34d. The miscellaneous traffic consists of timber, bark, agricultural and vegetable seeds (in 5-ton lots), firewood, bricks, drain-pipes, coal, road métal, and traffic of a similar nature. The "A" and "B" classes cover lime, vegetables, tobacco leaf, caustic soda, and potash, cement, copper ingots, fat and tallow, water and mining plant, leather, agricultural implements, and other traffic of a similar nature:—

Description of Traffic.	Tons carried.	Average number of miles each ton of traffic is carried.	Earnings per ton per mile.
	tons.	miles.	d.
Coal, coke, and shale	4,564,668	20·15	0·56
Minerals (other than coal, coke, and shale, and crude ores).	222,748	37·84	0·90
Crude ores	117,102	99·02	0·53
Miscellaneous	293,702	47·30	0·95
Firewood	231,910	26·50	0·79
Fruit	46,514	84·33	1·03
Grain, flour, &c., "Up" journey	502,206	245·18	0·44
Hay, straw, and chaff	169,481	209·78	0·38
Frozen and chilled meat	10,965	53·46	1·01
General goods (truck loads)	3,839	367·66	2·61
"A" class	375,058	82·58	1·19
"B" ,,	190,404	107·20	1·75
"C" ,,	59,256	151·58	2·00
1 ,,	64,811	146·65	3·09
2 ,,	39,916	162·62	3·77
3 ,,	96,318	160·01	4·68
Wool	117,469	278·42	2·03
Live stock	228,834	251·35	1·75
	7,335,201	65·25	1·14
Terminal charges	....	....	0·20
Total	7,335,201	65·25	1·34

The accompanying statement shows the receipts for carrying goods 1 mile along the lines of the State. The information reaches back to 1872, when the charge was 3·6d., while after an interval of thirty-four years it has fallen to 1·3d. The decrease, however, is to some extent more apparent than real, inasmuch as it represents a more extensive development of the mineral-trade than of the carriage of general merchandise; but when due allowance has been made on this score, it will be found that the benefit to the general producer and consumer has been very substantial:—

1872	3·6d.	1883	2·0d.	1897	1·6d.
1873	3·3d.	1884	1·9d.	1898	1·5d.
1874	3·0d.	1885	1·9d.	1899–1900	1·5d.
1875	3·1d.	1886	1·8d.	1900–1901	1·3d.
1876	2·8d.	1887	1·8d.	1901–1902	1·3d.
1877	2·7d.	1891	1·9d.	1902–1903	1·2d.
1878	2·4d.	1892	1·8d.	1903–1904	1·2d.
1879	2·3d.	1893	1·8d.	1904–1905	1·2d.
1880	2·3d.	1894	1·8d.	1905–1906	1·3d.
1881	2·3d.	1895	1·6d.		
1882	2·1d.	1896	1·6d.		

The figures just given should not be too strongly relied upon in comparing one year with another; but they may safely be taken as indicating generally the lessened cost of carriage to persons forwarding goods by rail. The reduction is most noticeable in regard to agricultural produce and live stock.

During the year ended 30th June, 1895, some important reductions were made in the rates for the conveyance of goods and live stock. The rates for cattle were lowered to the scale of charges applicable to sheep, this being practically a reduction of 20 per cent. In March a general revision of the goods classification was made, by which many articles were placed in the lower classes. The rates for coal in the Newcastle district, and from the western mines to Sydney and district, were also slightly reduced. By a revision of the wool tariff, the anomaly of charging higher rates from stations nearer to Sydney and Newcastle than from others at longer distances on the same line, but which are affected by the interior river and other competition, was entirely removed. In April, 1896, a general reclassification of goods came into force, by which numerous articles were reduced to lower classes. Further reductions were made at the same time in the rates for the carriage of agricultural produce over long distances. The rates for agricultural implements, forwarded in 5-ton truck loads, were reduced by 50 per cent., and for small consignments by 20 per cent. To assist the mining industry, the rates for explosives and mining machinery were also reduced, the latter by 50 per cent.

The introduction of "Starving stock rates" on the Government railways became necessary during the year 1898-99 on account of the disastrous effects of the drought. These rates permitted a reduction of 50 per cent. on the ordinary charges from the drought-stricken districts to places where feed and water were obtainable. Stock of which a forced sale was made by reason of the necessity for removal to another district for feed, were treated in like manner. Where travelling stock routes could not be used, and store stock required transit by railway, a reduction of 25 per cent. on usual rates was allowed on carriage for distances not less than 100 miles. A similar reduction in the freight of fodder for starving stock was also made. These concessions were largely availed of, and helped in some measure to minimise the losses from the unfavourable seasons.

The revenue from goods and live stock traffic per head of population rose rapidly from the opening of the lines until the year 1883, when it stood at 30s. 4d., at which figure it remained in 1884. Bad seasons in subsequent years caused a falling-off, so that by 1888 the average was only 27s. per inhabitant. For a number of years afterwards there was a steady increase, and in 1892 the average stood at 33s.—the highest figure yet attained; in 1894 this had decreased to 29s. 1d., but in 1895 there was a rise to 29s. 11d. In 1896, owing chiefly to the diminished wool traffic, and partly also to the

Newcastle strike, the figures dropped to 28s. 1d.; in 1897, there was a rise to 29s. 11d., but the effect of the drought was noticeable in 1898, when the average per head dropped to 29s. 2d. An improvement was, however, presented in 1899, 1901, 1902, 1905 and 1906, when the average per head rose to 30s., 32s. 3d., 32s. 5d., 30s. 3d. and 35s. 2d. respectively. The results achieved must be regarded as very satisfactory, especially in face of the general reduction in the freights:—

Year.	Amount.			Year.	Amount.		
	£	s.	d.		£	s.	d.
1860	0	0	11·8	1894	1	9	1·1
1865	0	3	7·8	1895	1	9	11·3
1870	0	7	8·7	1896	1	8	1·8
1875	0	13	11·8	1897	1	9	11·6
1880	1	1	1·9	1898	1	9	2·4
1885	1	8	11·7	1899	1	10	0·8
1886	1	7	0·5	1900	1	8	9·7
1887	1	7	0·3	1901	1	12	3·5
1888	1	6	11·7	1902	1	12	5·5
1889	1	8	9·4	1903	1	6	11·1
1890	1	9	1·0	1904	1	7	10·2
1891	1	12	0·5	1905	1	10	3·7
1892	1	13	0·1	1906	1	15	2·0
1893	1	10	4·9				

Rolling-stock.

The rolling-stock of New South Wales Railways, on the 30th June, 1906, consisted of 655 engines, 540 tenders, 1,143 coaching stock, 11,522 goods vehicles, and 1,058 stock for departmental use only, making a total of 14,918 stock. These figures represent an increase of 32 engines, 32 tenders, 21 coaching vehicles, and 1 departmental vehicle, and a reduction of 34 goods vehicles on the figures of the previous year. The number of engine miles run was 14,999,032, while the train miles numbered 11,863,682. The fitting of the goods stock with the Westinghouse quick-acting freight brake appliances was completed in 1898-9, and much progress has been made with the work of interlocking of points and signals—Sykes' system of lock and block being introduced on the busy suburban sections.

Employment, Wages, &c.

The persons employed on the railways of the State in June, 1906, numbered 13,478, of whom 1,650 were on the salaried staff, and 11,828 on wages, being an increase of 188 employees over those of the previous year. The wages paid during the year amounted to £1,456,729 as against £1,417,496 in the previous year. Of the former sum, the Maintenance Branch received £419,790, the Locomotive Branch, £693,013; while the Traffic Branch absorbed £343,926. Additions to stations, buildings, &c., and rolling-stock and additional appliances cost £563,514, which was charged to capital account.

Compensation for personal injury was paid during the twelve months ended 30th June, 1906, to the amount of £2,540, and for damage to and loss of goods £2,305. The maximum amount recoverable from the Railway Commissioners in connection with injuries sustained by any one person has been limited by the Government Railways Compensation Act of 1896 to £2,000.

The cost of fuel is, naturally, a large item in the railway accounts. For the last working year the expenditure on coal, coke, and wood amounted to £173,396. The fuel consumed on the locomotives amounted to 419,364 tons, or an average of 62·6 lb. per engine mile.

Railway Accidents.

The railways of New South Wales have been as free from accidents of a serious character as the lines of most other countries. In order to obtain a common basis of comparison it is usual to find the proportion which the number of persons killed or injured bears to the total passengers carried. There is, however, no necessary connection between the two, for it is obvious that accidents may occur on lines chiefly devoted to goods traffic, and a more reasonable basis would be the accidents to passengers only compared with the number of passengers carried. The data from which such a comparison could be made are wanting for some countries; so far as the figures can be given, however, they are shown in the following table, which exhibits the number of passengers killed and injured per million persons carried. The figures are calculated over a period of five years and brought down to the latest available dates:—

Countries.	Accidents per million passengers carried.		Countries.	Accidents per million passengers carried.	
	Killed.	Injured.		Killed.	Injured.
Germany	0·10	0·47	Russia	1·01	5·13
Austria-Hungary	0·10	1·07	United Kingdom	0·11	2·11
Belgium	0·09	2·56	Spain	0·57	2·66
Sweden	0·17	0·31	Canada	...	...
France	0·10	0·86	New South Wales	0·08	0·96
Norway	0·15	0·20	Victoria	0·06	3·58
Netherlands	0·17	0·80	South Australia	0·18	0·40
Switzerland	0·16	1·05	New Zealand	0·98	3·32

The above comparison is not, however, a perfect one, as the question of the distance travelled by each passenger is an important element of the risk run, and is omitted from consideration. If this were made a factor, it would probably be found that the risk of each traveller by rail would show less variation in the different countries than would seem to be the case from the figures just given.

The persons meeting with accidents on railway lines may be grouped under three heads—passengers, employees, and trespassers; and the accidents themselves may be classified into those arising from causes beyond the control of the persons injured, and those due to misconduct or want of caution.

The accidents may be further subdivided into those connected with the movement of railway vehicles and those apart from such movement. Adopting such classifications the returns for the quinquennial period terminating on the 30th June, 1906, show that 29 passengers were injured from causes beyond their own control in accidents connected with the movement of railway vehicles; and 13 were killed and 134 injured in accidents connected with the movement of railway vehicles, and 34 injured in accidents apart from such movement consequent on their own misconduct or want of caution. In the case of servants of the Department, the returns show 1 killed and 53 injured in accidents connected with the movement of railway vehicles, and 1 killed and 31 injured apart from such movement, from causes beyond their own control; while 62 were killed and 742 injured in accidents connected with the movement of railway vehicles, and 2 killed and 2,582 injured in accidents apart from such movement owing to their own misconduct or want of caution. With regard to trespassers and others the records show a total of 96 killed and 72 injured by accidents connected with the movement of railway vehicles and 10 killed and 147 injured in accidents not connected with such movement. From the figures in the following table it will be seen that 0·17 passengers per million carried were injured through causes beyond their own control in accidents connected with the movement of railway vehicles, while it was owing to their own misconduct or want of caution that 0·08 passengers per million carried were killed, and 0·79 per million were injured in accidents connected with such movement. Further, 0·20 passengers per million carried were injured in accidents apart from the movement of railway vehicles in consequence of their own misconduct or want of caution.

In the following statement, particulars regarding accidents on the Government Railways of New South Wales are given for five years:—

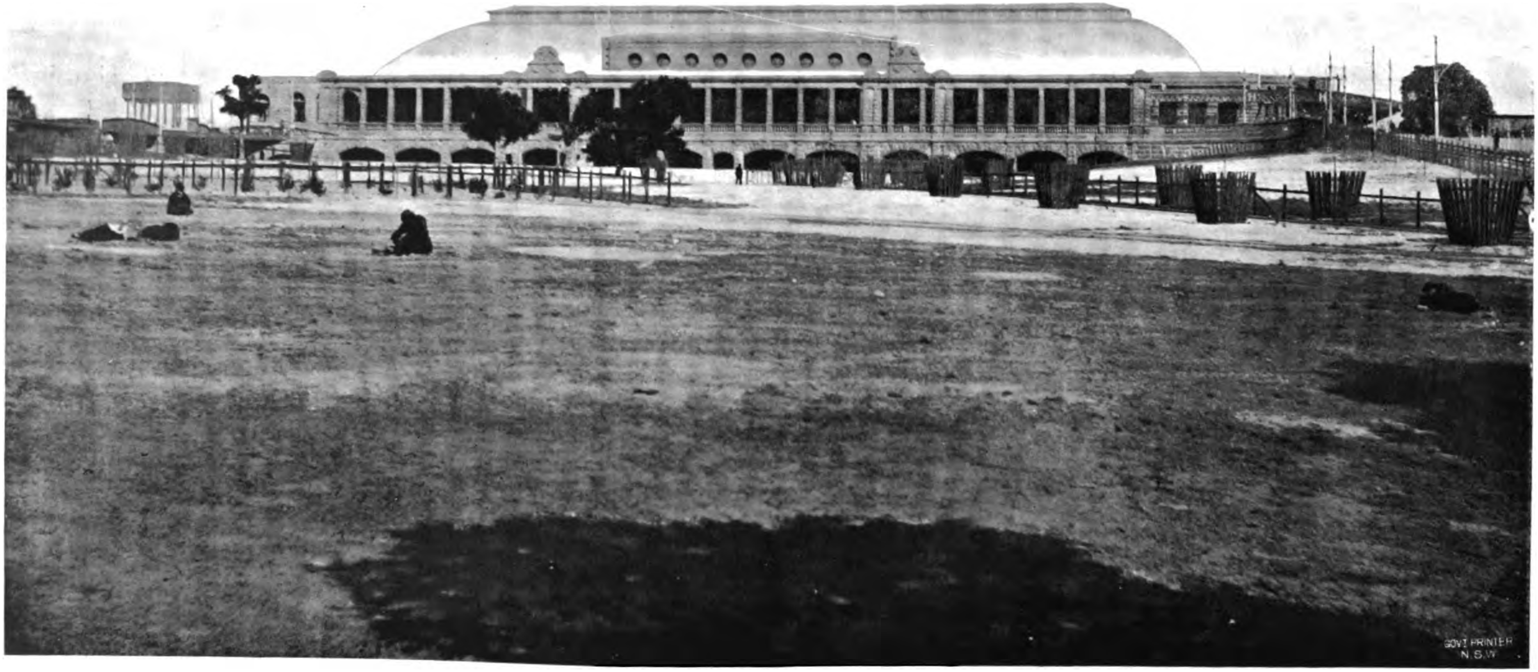
Year.	Passengers.				Servants of the Department.				Trespassers and Others.		Total.	
	Causes beyond their own control.		Their own misconduct or want of caution.		Causes beyond their own control.		Their own misconduct or want of caution.					
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
	Accidents connected with the Movement of Railway Vehicles.											
1901-2	...	3	2	34	...	16	14	200	17	10	33	263
1902-3	...	4	2	24	...	15	13	163	22	13	37	219
1903-4	...	3	4	18	...	7	20	148	16	17	40	193
1904-5	...	6	2	25	...	5	7	124	17	9	26	169
1905-6	...	13	3	33	1	10	8	107	24	23	36	186
	Accidents not connected with the Movement of Railway Vehicles.											
1901-2	...	...	...	3	...	4	...	530	1	22	1	559
1902-3	...	...	...	9	..	10	1	549	4	21	5	589
1903-4	...	...	...	3	1	2	1	524	2	30	4	559
1904-5	...	...	...	9	...	4	...	461	1	24	1	498
1905-6	...	...	...	10	...	11	...	518	2	50	2	589

The returns are compiled on lines similar to those adopted by the Board of Trade in England, and all accidents which occur in the working of the railways, or on railway premises, to persons other than servants of the Department are reported, however slight the injuries may be. In the case of servants of the Department, only those accidents which prevent the servant injured from being employed for five hours on his ordinary work on any one of the three working days next after the accident are reported.

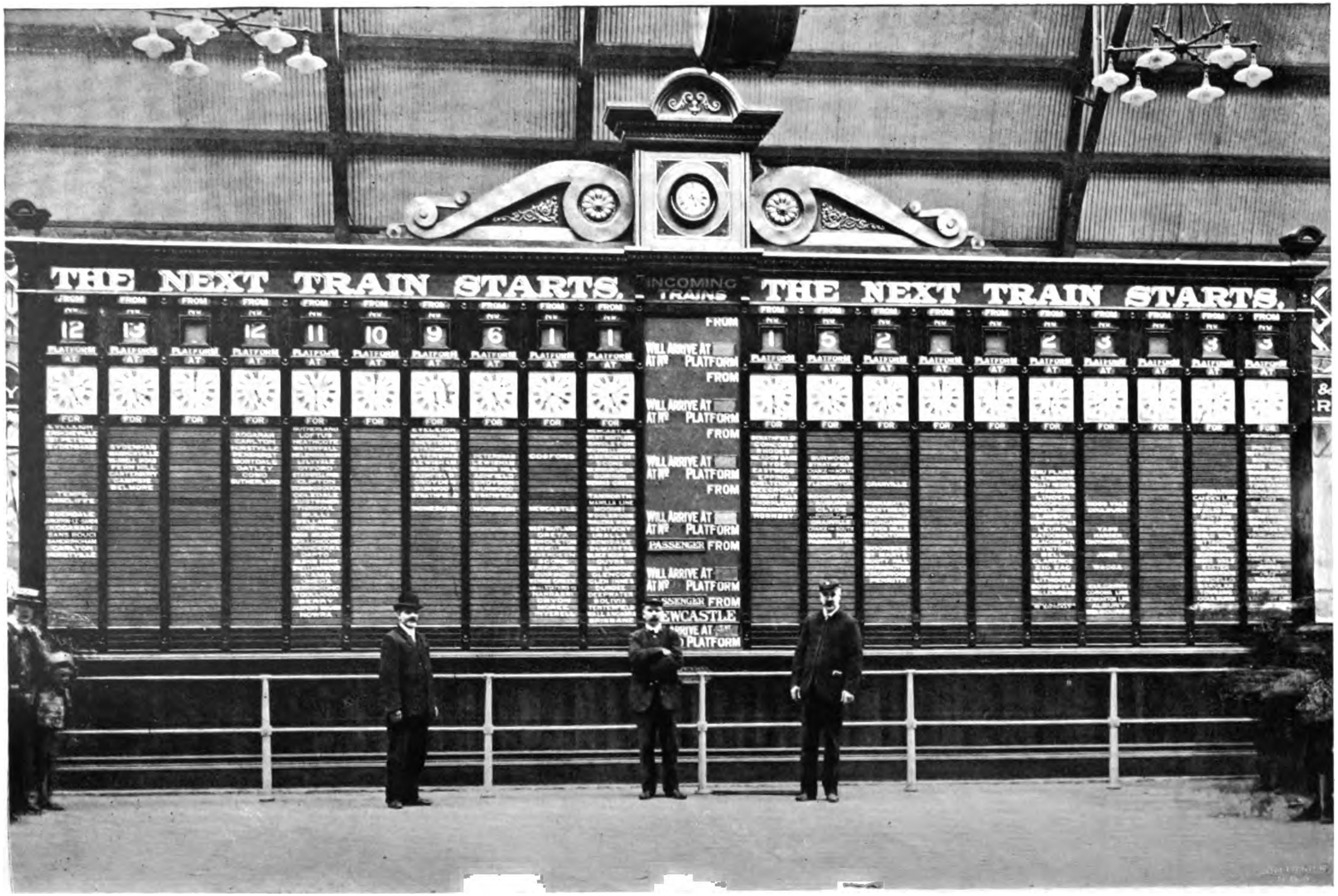
The amount of compensation paid during the twelve months ended 30th June, 1906, in connection with accidents on railways was £4,845, of which £2,540 was paid in respect of passengers, and £2,305 in regard to goods.

SYDNEY RAILWAY STATION.

The necessity for a new railway station more in keeping with the importance of Sydney as the mother city of Australia, had long been recognised, but the initiation of the work was delayed owing to differences of opinion respecting the most suitable site for its location. A site was finally decided on a few hundred yards to the north of the old station; and the new building, in a partially complete form, was opened for traffic in August, 1906. Even in its present condition, the station is a remarkably handsome and commodious structure, and it will afford ample accommodation to meet the demands of a largely increasing traffic for years to come. At the latest available date it was computed that the average number of passengers travelling in and out of Sydney daily was no less than 61,500.



CENTRAL RAILWAY STATION, SYDNEY.



INDICATOR CENTRAL RAILWAY STATION, SYDNEY.

The main entrance to the station is on the northern or Sydney side, facing Belmore Park, from which the majestic proportions of the building are seen to great advantage. At present the station consists of two stories, but the completed plans provide for additional stories to be used as offices for the Railway Commissioners and the several administrative branches of the Department. Only the working traffic officers have as yet been accommodated in the building, but the public has been most generously provided for in the way of luxurious waiting and refreshment rooms, together with all the necessary baggage and parcels offices.

The main booking hall, which is provided with twenty-five windows, is of splendid design, the walls being panelled with coloured marble from New South Wales quarries, cut and polished locally. Similar panelling adorns the several exits and entrances to the assembly platform. The assembly platform is 348 feet long by 70 feet wide, with a superficial area of 24,360 feet.

The train platforms have an average length of 700 feet, and a width of 30 feet. Altogether, the space available for passenger movement is 172,387 superficial feet, or more than double that existing at the old station; while the whole of the arrangements in the new building have been carried out in accordance with the latest and best methods.

The actual length of the lines within the platform docks for train service is nearly 2½ miles. Interlocking arrangements permit of three trains entering and three leaving the station at the same time, while the connections permit of the crossing of trains from one side of the yard to the other with a minimum of inconvenience and delay.

Within the station yard limits, the total length of the main lines and sidings is 15 miles. Few stations in the world possess greater accommodation in this respect, and it is doubtful if any can present a better approach and appearance.

Very complete arrangements have been made for the expeditious handling of passengers' luggage and parcels, these being moved from the platforms by means of electric lifts, directly to a subway fitted with carriers which transport their loads to the points required. All cumbering of the platform area with luggage, &c., is thus obviated.

For the convenience of persons arriving at or leaving the station in vehicles, a covered way is provided leading directly to the assembly platform, while the trams to and from the city have waiting stages outside the assembly platform, in a covered way of ample width, and with a length of about 300 feet.

In addition to lavish provision for the safety and convenience of the public, considerable attention has been given to the installation of the latest appliances for the safe working of the traffic. At the original station the signals were worked by hand labour, but at the new building the Westinghouse Electric Pneumatic System has been installed: all points, lock-bars, and signals being worked by compressed air; the change involving a great saving in time and physical exertion to the employees. While facilitating signal operations in the new yard, the station signal-box controls 71 points and lock-bars, and 116 signals; and at the new tunnel signal-box at the southern end of the yard, 19 points and 70 signals are controlled, so that altogether the signal-boxes deal with the working of 90 points and 186 signals

Another useful innovation is the installation of "Annett's Route Indicator," the object of this system being to reduce the number of semaphore signal arms and lights as much as possible consistently with safe working.

The expenditure in connection with the new station may be set down roughly at £1,000,000.

PRIVATE RAILWAY LINES.

In New South Wales the established policy has hitherto been to keep the railways under State management and control, and at the present time there are only three private lines in operation, with the exception of short lines to connect coal-mines with the main railways, &c. In 1874 Parliament granted permission to a company to construct a line from Deniliquin, in the centre of the Riverina district, to Moama, on the Murray, where it meets the railway system of Victoria. A considerable proportion of the wool and other produce of Riverina reaches the Melbourne market by this route. The line, which was opened in the year 1876, is 45 miles in length. The land required was granted by the State, right being reserved for the purchase of the line at any time after twenty-one years from the passing of the Act. The total capital expended is £162,672, £40,000 of which was raised by debentures—£30,000 now outstanding—and there is a reserve fund of £14,008. The dividends formerly paid averaged 10 per cent., but the latest dividend declared was at the rate of 2½ per cent. per annum. During the year 1888 a line, 35 miles 54 chains in length, was laid down from the Barrier Silver-mines, Silverton, and Broken Hill, to the South Australian border. The total capital expended is £385,017, of which £80,000 was raised by debentures, and there is a reserve fund of £50,000. The line since its opening has had large support. In 1891 the large dividend of 70 per cent. was declared. The latest dividend declared was at the rate of 20 per cent. on paid-up capital. A short line connects Liverpool with the Warwick Farm Racecourse. The following table shows the operations of these lines during the year 1905 :—

Name.	Line.		Total Capital Expended.	Reserve Fund.	Debentures Outstanding.	Passengers Carried.	Goods Carried.	Live Stock Carried.	Train Miles Run.
	Length.	Gauge.							
	m. ch.	ft. in.	£	£	£	No.	tons.	tons.	No.
Deniliquin and Moama	45 0	5 3	162,672	14,008	30,000	10,688	13,322	5,314	38,100
Silverton	35 54	3 6	385,017	50,000	...	30,888	593,083	No. 6,269	112,579
Warwick Farm ...	0 60	4 8½	5,700	...	...	13,146	...	355	...

The Deniliquin and Moama Company possesses 4 locomotives, 6 passenger carriages, and 63 goods carriages and vans; and the Silverton Company has 15 locomotives, 16 passenger carriages, and 520 goods vehicles. On the Warwick Farm line Government rolling-stock is used.

Authority was obtained during 1893 for the construction of a private line from Menindie to Broken Hill, in the western district, and one from Rosehill to Dural, being a continuation of the Clyde to Rosehill line in the Parramatta district. Nothing has been done in respect of the former, but the latter was opened for traffic as far as Carlingford under the control of the Railway Commissioners, the Government having purchased the line on the 1st August, 1901.

TRAMWAYS.

The tramways, as well as the railways, are the property of the State Government, and are under the control of the Railway Commissioners. There were in June, 1906, eight distinct systems of tramways in operation, comprising the City and Suburban electric lines, measuring 73 miles 57 chains; the North Shore electric lines, 11 miles 68 chains; the Ashfield to Enfield and Mortlake steam tramway, 7 miles 40 chains; Kogarah to Sans Souci steam tramway, 4 miles 71 chains; the Newcastle to Plattsburg tramway (including Plattsburg, Tighe's Hill, Mayfield, Merewether, and Adamstown sections), 16 miles 16 chains; the Broken Hill steam tramway, 6 miles 17 chains; Parramatta to Baulkham Hills steam tramway, 4 miles 37 chains; and the Manly horse tram, 1 mile 23 chains; giving a total of 126 miles 9 chains of line in use.

The metropolitan tramways may fairly be regarded as street railways. A cable tramway was inaugurated at North Sydney some years ago, but it has since been converted into an electric line; and another cable tramway extending along King-street, the heart of Sydney, to the suburb of Woollahra, *via* William-street, was opened in 1894, but was recently converted to electric traction. The electric system was not introduced into the city until the close of 1899, but for some years it has been in operation at North Sydney, where a trunk line now runs from Milson's Point to Mosman, with branches to Gore Hill, Willoughby, Neutral Bay, and to the waters of Middle Harbour at the Spit. On the 8th December, 1899, the George-street-Harris-street electric tramway was opened to traffic. This line extends from the Circular Quay, along George-street to the Redfern Station, and thence to the populous district of Pyrmont; it is a double track and measures in length 3 miles 20 chains. The construction of single lines along Pitt-street and Castlereagh-street has been carried out with the object of relieving George-street of a portion of the traffic between the Circular Quay and Redfern Railway Station. The conversion of the whole of the steam tramways in the metropolitan district into an electrical system has now been completed with the exception of the Ashfield to Enfield and Mortlake line, and provision for the electrical power required has been made at the works at Ultimo.

The following table gives some interesting particulars respecting the metropolitan tramways, excluding those on the North Shore and the Ashfield to Enfield and Mortlake line. For 1905 the returns include, for the first time, the King-street to South Head line. In the year 1879, the tramways were open for only three and a half months, and for part of that time were worked by horse-power. The accounts since 1887 have been made up to the 30th June in each year:—

Year.	Length of Line.	Tram Mileage.	Total Earnings.	Working Expenses.	Earnings per Tram Mile.	Working cost per Tram Mile.	Proportion of working cost to gross earnings.	Net Earnings.	Capital spent on Lines open.	Interest on Capital.
	miles.		£	£	d.	d.	d.	£	£	per cent
1879	1½	13,270	4,416	2,278	79·87	41·19	51·59	2,138	22,269	33·00
1880	4	84,074	18,980	13,444	54·18	38·38	70·83	5,536	60,218	12·34
1881	9½	296,906	62,549	52,107	50·56	42·12	83·31	10,442	169,450	6·16
1882	22	670,649	126,202	103,136	45·16	36·91	81·72	23,066	412,561	6·80
1883	25	1,076,096	190,699	178,877	42·53	39·89	93·80	11,822	544,105	2·22
1884	27½	1,242,491	219,942	215,167	42·48	41·56	97·83	4,775	643,111	0·76
1885	27½	1,220,500	223,340	207,995	43·91	40·90	93·13	15,345	708,109	2·17
1886	27½	1,222,943	226,367	201,737	44·42	39·59	89·12	24,630	742,113	3·32
1887	29½	1,220,026	214,125	201,468	42·12	39·63	94·08	12,657	731,582	1·76
1888	29½	1,246,543	221,060	204,227	42·56	39·32	92·38	16,833	742,555	2·27
1889	29½	1,338,386	225,833	206,092	40·49	36·95	91·25	19,741	771,255	2·56
1890	30½	1,474,646	249,508	207,517	40·60	36·46	83·17	41,991	790,555	5·31
1891	33½	1,553,048	270,365	221,505	41·78	34·23	81·92	48,860	857,455	5·74
1892	37	1,613,443	279,321	229,145	41·55	34·09	82·04	50,176	932,907	5·54
1893	38	1,681,232	271,041	214,824	38·69	30·67	79·26	56,217	947,775	5·94
1894	40¼	1,737,846	250,809	206,554	34·64	28·53	82·35	44,255	954,035	4·64
1895	40¼	1,740,235	230,583	186,081	31·80	25·66	80·70	44,502	962,037	4·62
1896	40¼	1,845,626	227,525	187,811	29·59	24·42	82·54	39,714	961,778	4·13
1897	40¼	2,121,017	238,023	195,142	26·93	22·08	81·98	42,881	968,925	4·42
1898	40¼	2,198,351	239,858	201,904	26·18	22·04	84·18	37,954	973,419	3·90
1899	40¼	2,329,751	262,045	220,193	26·99	22·68	84·03	41,852	977,107	4·28
1900	43¼	3,106,185	315,930	268,504	24·41	20·75	84·99	47,426	1,338,006	4·06
1901	48¾	5,208,510	438,668	366,018	20·21	16·86	83·44	72,650	1,535,958	4·77
1902	58	7,203,600	495,538	429,093	16·51	14·30	86·59	66,445	2,059,515	3·34
1903	66½	11,115,765	593,306	511,878	12·81	11·05	86·28	81,428	2,442,791	3·37
1904	66¾	13,280,587	633,477	521,896	11·45	9·43	82·39	111,581	2,507,540	4·45
1905	73¼	14,413,273	697,971	583,360	11·62	9·71	83·58	114,611	2,931,583	3·91
1906	73¾	14,246,845	730,508	552,723	12·31	9·31	75·66	177,785	2,966,704	5·99

The actual interest on the public debt, allowing for the fact that many of the loans were floated below par, is 3·68 per cent.; the tramways, therefore, have for fifteen out of the last seventeen years yielded more than the cost of working and interest. It must, however, be remembered that the State does not set apart any portion of the earnings for renewals, which may hereafter prove a considerable item, as a large part of the rolling-stock is new.

The fares paid on the tramways included in the previous table average about 0·55d. per mile, the lines being divided into penny sections of about 1¾ mile. For the whole of the tramways in the Metropolitan area the average length of the sections is about 1½ mile, and the fare per mile 0·635d. Reductions made in fares are considerable, and on many lines improved services have been provided. The number of persons using the tram-cars could not be ascertained with any exactness until quite recently, as the tickets collected for separate penny and two-penny sections gave only a partial indication of the number travelling. The introduction of a system of through cash fares on all lines has, however, made such a calculation possible. It was found that during the year 1903-4 no less than 129,893,747 passengers travelled on the tramways in the metropolitan area, while the number for the year just closed reached 136,848,238, the continued increase being due to the popularity of the electric system and the penny sections.

The following table shows the total and average cost of the various sections of the tramways open on the 30th June, 1906:—

Section.	Motive Power.	Length.			Total Cost.	Average cost per mile.
		ms.	chs.	lks.	£	£
Railway to Bridge-street	Electric	1	63	0	101,860	56,984
Randwick and Coogee	„	5	32	75	129,890	24,012
Waverley and Bondi	„	5	54	85	158,245	27,832
Waverley to Randwick	„	1	18	0	11,951	9,756
Crown-street	„	0	69	50	30,617	35,243
Railway to Glebe and Forest Lodge	„	2	27	66	46,934	20,008
Forest Lodge to Balmain	„	2	66	0	98,573	34,893
Glebe Junction to Newtown, Marrickville, and Dulwich Hill.	„	4	10	75	110,557	26,741
Forest Lodge Junction to Leichhardt, Five Dock, and Abbotsford.	„	6	62	70	76,928	11,340
Railway to Botany	„	6	63	65	101,836	14,912
Newtown to St. Peter's and Cook's River	„	2	57	50	28,455	10,466
Redfern to Moore Park	„	1	26	0	20,579	15,531
Ocean-street	„	2	38	50	151,241	60,954
Rose Bay, Dover-road, and South Head	„	4	18	0	53,275	12,669
North Shore Lines	„	11	68	19	216,167	18,238
George and Harris streets	„	3	43	20	146,498	41,384
Newcastle Lines	Steam	16	16	55	145,347	8,975
Kensington Line to Rifle Range and Little Bay	Electric	6	53	0	40,634	6,099
Randwick Racecourse Loop	„	0	52	0	7,525	11,577
George-street to Miller's Point	„	0	55	25	14,548	21,065
Ashfield to Enfield and Mortlake	Steam	7	40	50	38,655	5,150
Kogarah to Sans Souci	„	4	71	0	12,147	2,485
Pitt and Castlereagh Streets to Fort Macquarie	Electric	3	42	75	123,341	34,898
Botany Road to St. Peter's	„	1	34	0	15,240	10,695
Broken Hill Lines	Steam	6	17	0	37,713	6,071
Little Bay to La Perouse and Springvale	Electric	3	48	0	20,303	5,640
Baulkham Hills Line	Steam	4	37	19	22,990	5,149
Gladstone Park to Darling-street Wharf, Balmain	Electric	0	55	0	13,237	19,254
Bridge-street to Circular Quay	„	0	48	0	7,192	11,987
Zetland Line	„	1	45	0	16,083	10,293
Balmain to Drummoyne	„	2	12	0	22,831	10,619
Manly to Curl Curl	Horse	1	23	0	11,684	9,075
Cost of Construction	....	126	9	49	2,032,576	16,116
Equipment:—						
Rolling-stock	....	....			762,987	......
Ultimo Power House, Sub-stations and Plant	....	....			714,153	......
Machinery	....	....			68,606	......
Workshops	....	....			88,382	......
Furniture	....	....			2,392	......
Total and average cost	....	126	9	49	3,669,096	29,092

The North Shore electric lines yielded a revenue during the year ended 30th June, 1906, of £52,109; and the working expenditure amounted to £45,230. The amount left to meet interest charges was, therefore, £6,879.

The number of passengers carried was 9,641,474, and the cost of construction and equipment amounted to £293,232.

The Ashfield to Enfield and Mortlake lines yielded a gross revenue during the year of £6,000; the working expenses were £8,542, leaving a loss, exclusive of interest on capital invested, of £2,542. The cost of construction and equipment of this line amounted to £49,224. The number of passengers carried was 1,030,154.

The Kogarah to Sans Souci tramway showed a loss, apart from interest on capital expenditure, of £345 on the year's transactions, the gross revenue being £2,796, and working expenses £3,141. The cost of construction and equipment was £20,764, and there were 291,828 passengers carried during the year.

The Newcastle suburban lines returned a profit of £5,535 on the year's working, without taking into consideration interest on capital expenditure, the gross revenue being £43,585, and working expenses £38,050. The passengers carried during the year numbered 6,211,616; and the amount expended on construction and equipment to 30th June, 1906, was £232,298.

The Broken Hill lines show a profit of £1,310 on the year's transactions, exclusive of interest on capital invested, the revenue being £12,670 and working expenses £11,360. An amount of £59,336 has been expended on construction and equipment; and 1,757,444 passengers were carried during the year.

The Parramatta to Baulkham Hills line shows receipts for the year just closed amounting to £2,728, and working expenses £3,340. The cost of construction and equipment of the line was £29,759, and 338,708 passengers were carried.

The Manly horse tram shows a loss of £266 on the year's transactions, the gross revenue being £530, and the working expenses £796. Passengers to the number of 128,102 were carried, and £12,448 has been expended on construction and equipment.

In the following table are given details of revenue and expenditure, and capital invested for all State tramways, since their inception in 1879. The net earnings of the tramways for the last quinquennial period amounted to 3·77 per cent. on cost of construction and equipment, which compares favourably with 3·68 per cent., the actual interest on the public debt, taking into consideration the actual sum obtained by the State for its loans, many of which were floated below par:—

Year.	Total Length of Lines.	Capital Expended on Lines open for Traffic.	Gross Revenue.	Working Expenses.	Net Earnings.
	Miles.	£	£	£	£
1879	1½	22,061	4,416	2,278	2,138
1880	4½	60,218	18,980	13,444	5,536
1881	11¼	181,659	62,549	52,107	10,442
1882	29⅛	447,939	128,354	120,181	8,173
1883	32½	579,439	193,929	183,218	10,711
1884	35	683,179	223,454	215,086	8,368
1885	35	748,506	227,144	207,898	19,246
1886	36½	854,260	234,143	207,635	26,508
1887	51	917,995	229,772	211,722	18,050
1888	43½	907,987	241,838	217,629	24,209
1889	38½	909,595	243,563	221,835	21,728
1890	39½	933,614	268,962	224,073	44,889
1891	42½	1,004,212	292,850	239,679	53,171
1892	48	1,099,659	305,090	248,591	56,499
1893	49	1,118,471	295,367	233,808	61,559
1894	58½	1,248,986	278,194	229,283	48,911
1895	61	1,428,518	282,316	230,993	51,323
1896	61	1,434,896	289,181	236,283	52,898
1897	62¼	1,452,670	306,695	248,881	57,814
1898	65	1,478,251	313,871	259,141	54,730
1899	66½	1,516,843	348,556	288,022	60,534
1900	71½	1,924,720	409,724	341,127	68,597
1901	79¼	2,194,493	551,674	462,471	89,203
1902	104	2,829,363	631,757	541,984	89,773
1903	124¼	3,371,587	752,034	654,165	97,869
1904	125¼	3,471,759	802,985	673,625	129,360
1905	125¾	3,637,922	813,569	685,682	127,887
1906	126	3,669,096	851,483	665,083	186,400

The tramway rolling-stock on the 30th June, 1906, consisted of 68 motors, 76 steam cars, 12 grip, and 20 trail cars for cable lines; 684 motors and 51 trail cars for electric lines, 42 service vehicles, and 4 motor omnibuses, making a total of 957. The tram mileage during the year was 16,309,907, being a decrease of 103,855 miles on that of the preceding year.

During the year ended June, 1906, the total amount of wages paid by the Tramway Department was £467,861, as against £504,715 in the previous year. Of the sum of £467,861, £66,353 was paid to the Maintenance Branch, £131,618 to the Electric Branch, and £269,890 to the Traffic Branch. The number of men employed was 4,133, as against 4,378 in the previous year. The salaried staff numbered 204, and 3,929 were receiving wages. Taking railways and tramways together, the number of persons employed was 17,611, of whom 1,854 were on the salaried staff, and 15,757 were on wages. To the latter the sum of £1,924,590 was paid as wages during the year, being £1,456,729 for services on the railways, and £467,861 for the performance of work on the tramways. In the preceding year the wages were—railways, £1,417,496; tramways, £504,715; total, £1,922,211. The receipts per employee on the wages staff—railways and tramways—averaged £122 2s. 10d. for the twelve months.

Investigation shows that the method of recording accidents on tramways can only be viewed as satisfactory during the last five years. For the quinquennial period, which closed on the 30th June, 1906, 1 passenger was killed, and 165 injured from causes beyond their own control in accidents connected with the movement of tramway vehicles, while 39 were killed and 539 injured in accidents connected with the movement of tramway vehicles, and 10 others injured in accidents not connected with such movement, through their own misconduct or want of caution. In the case of servants of the Department, the returns show a total of 35 injured by accidents in connection with the movement of tramway vehicles, and 16 injured by accidents apart from such movement from causes beyond their own control, while 7 were killed and 568 injured in accidents connected with the movement of tramway vehicles, and 4 were killed and 764 injured in accidents apart from such movement, owing to their own misconduct or want of caution. As regards persons other than passengers or servants of the Department, 66 were killed and 554 injured by accidents connected with the movement of tramway vehicles, and 9 were injured in accidents not connected with such movement.

The number of passengers carried on the tramways during the year ended 30th June, 1906, was 145,262,779, which would give the rate of fatal accidents to passengers as 0·062 per million. The whole of the accidents were due entirely to misconduct or want of caution on the part of passengers. Seeing that the tramways for a great part of their course traverse crowded streets, the number of fatal and non-fatal accidents to persons who are neither passengers nor employees must be considered very small.

The amount of compensation paid during the twelve months ended 30th June, 1906, in respect of accidents on the tramways was £7,253, as compared with £10,878 for the preceding year.

The accidents which occurred on the Government tramways during the last five years have been classified in the subjoined table, and have been tabulated on similar lines to those relating to the railways :—

Year.	Passengers.				Servants of the Department.				Others.		Total.	
	Causes beyond their own control.		Their own misconduct or want of caution.		Causes beyond their own control.		Their own misconduct or want of caution.					
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
Accidents connected with the Movement of Tramway Vehicles.												
1901-2	...	60	6	110	...	6	2	109	21	129	29	414
1902-3	...	3	15	126	...	12	1	127	21	124	37	392
1903-4	1	24	4	100	...	7	1	115	11	96	17	342
1904-5	...	37	5	97	...	6	2	108	5	85	12	333
1905-6	...	41	9	106	...	4	1	109	8	120	18	380
Accidents not connected with the Movement of Tramway Vehicles.												
1901-2	...	...	...	...	...	6	3	123	...	2	3	131
1902-3	...	...	..	1	...	5	...	194	...	2	...	202
1903-4	...	...	...	1	...	2	...	163	...	1	...	167
1904-5	...	...	...	2	...	...	1	160	...	1	1	163
1905-6	...	...	...	6	...	3	...	124	...	3	...	136

MOTOR OMNIBUSES.

The extended use of motor omnibuses in England, and the possibility of their being utilised as adjuncts to the tramway system of the State, led the Commissioners to obtain reports on the subject. The reports being of a favourable character, two chassis of the single-decked and two of the double-decked type were ordered from England, the bodies being constructed locally. The single-decked vehicles were put into service between Potts' Point and Darlinghurst Junction on the 4th December, 1905, and were continued until the 7th April, 1906, when they were withdrawn consequent on the unfavourable financial results. The route from Enmore to Wardell Road was next opened for traffic on the 23rd April, 1906, the four vehicles being used. The running was discontinued on the 29th May, 1906, owing to the vehicles being out of repair. It has been decided not to continue the service, as it proved unremunerative, and the vehicles were found to be unsuitable in construction for traffic and the roads upon which they were required to operate. The total cost of construction and equipment was £5,331, and the loss on working, irrespective of interest on capital invested, was £1,344. The number of passengers carried was 106,773.

PRIVATE TRAMWAYS.

There are three tramways under private control within the metropolitan area. One of these branches from the Illawarra line at Rockdale and runs to Lady Robinson's Beach, a distance of 1 mile. The line was constructed in 1885, and the original motive power was steam, subsequently converted into electric. The line is chiefly used by excursionists visiting the shores of Botany Bay. The remaining two are steam tramways, one passes through the township of Parramatta, commencing at the Park gates and continuing as far as the Newington Wharf at Duck River, a distance of 3 miles, where it connects with the Parramatta River steamers conveying passengers and goods to and from Sydney. The line was opened in 1883. The second line is that from Fassifern to Toronto, on Lake Macquarie, a distance of 2¾ miles, which was opened in 1891.

A private line was some years ago constructed at North Sydney for the purpose of connecting the tramway on the heights of St. Leonards with the village of Gordon. On this line a magnificent suspension bridge has been built. It is designed in three spans—one of 500 feet, and two end spans each of 150 feet, with an altitude of 180 feet above water-level. The tramway was, however, not quite completed, and has never been opened for traffic.

POSTS AND TELEGRAPHS.

UNDER the provisions of clause 51 of the Commonwealth of Australia Constitution Act, the control of the Post and Telegraph services became vested in the Commonwealth, and by proclamation these services were taken over on the 1st March, 1901. The system of administration and the rates levied in each State at the date of the union were, however, continued in force until the Commonwealth Postal Act was brought into operation on the 1st November, 1902, this measure securing uniformity in all the States. While the Post Office is now exclusively controlled by the Commonwealth, it is recognised that in any statistical account of New South Wales special reference should be made to a service which is so closely associated with the commercial and social life of the State.

Taking into consideration the large area of the State, New South Wales possesses an excellent system of postal and telegraphic communication. While the interstate system is fairly perfect, New South Wales is in direct communication with Europe and the rest of the world by means of the cables connecting with the various Asiatic, continental, and the Canadian and South African telegraph lines. The State is also connected with New Zealand by a submarine cable, which has its Australian terminus within sight of the spot where Captain Cook landed on the shores of Botany Bay, and within a stone's throw of the monument erected to the memory of La Pérouse—the unfortunate and gallant emulator of the great English navigator—and the tomb of Père Le Receveur, the botanist attached to his staff.

The history of the Postal Department cannot but be interesting, inasmuch as it affords a striking illustration of how very small beginnings have led to great results. For the twenty-three years succeeding the occupation of New South Wales there were no regular post offices, nor any means of postal communication. It was not until 1810 that the first post office in Australasia was established by Governor Macquarie, Mr. Isaac Nichols being appointed postmaster. The office was in High-street (now known as George-street) at the residence of Mr. Nichols, who was "in consideration of the trouble and expense attendant upon this duty" empowered to charge on delivery to the addressee 8d. for every English or foreign letter of whatever weight, and for every parcel weighing not more than 20 lb., 1s. 6d., and exceeding that weight 3s. The charge on colonial letters was 4d., irrespective of weight; and soldiers' letters, or those addressed to their wives, were charged 1d. Very little improvement in postal matters took place for some years, and it was not until 1825 that an Act was passed by Sir Thomas Brisbane, with the advice of the Council, "to regulate the postage of letters in New South Wales." This enactment provided for the establishment of post offices, and the determination of the rates of postage. Subsequently a proclamation was issued, fixing the rates of postage, and the salaries and allowances of postmasters; and inviting tenders for the conveyance of mails between Sydney and Parramatta, Windsor, and Liverpool; between Liverpool and Campbelltown; and from Parramatta to Emu Plains, and thence to Bathurst. The provisions of the Act, however, were not given full effect to until 1828. The rates of postage depended upon the distance and the difficulty of transmission. The lowest single inland rate was 3d., and the highest 12d., the postage on a letter increasing according to its weight, the minimum fee being charged on letters not exceeding ¼ ounce. Letters between New South Wales and Van Dieman's Land were charged 3d. each (ship rate) and newspapers 1d. Other ship letters were charged 4d. single rate, and 6d. for any weight in excess. The letters of the Governor and a number of the chief public officials were franked, and the correspondence to and from prisoners passed free under prescribed regulations. In 1828 the establishment in Sydney comprised one principal postmaster, one clerk, and one letter-carrier. A letter-carrier was subsequently appointed for Parramatta, and he was remunerated by being furnished with authority to charge the public 1d. on every letter delivered by him. The total amount of salaries paid during that year to country postmasters was £34 7s. 9d. A two-penny post was established in Sydney in 1831; and the Act of 1825 was repealed in 1835, Sir Richard Bourke being Governor, and another Act passed, fixing the charge on a single letter at 4d. for 15 miles, 5d. for 20 miles, 6d. for 30 miles, and so on up to 1s. for 300 miles. In 1837 a post office was established in Melbourne, which was then a part of New South Wales, and a fortnightly mail was established between that city and Sydney. Stamps were introduced in the same year in the form of stamped covers or envelopes, which are believed to have been the first postage stamps ever issued.

By the year 1838 the Sydney establishment comprised one Postmaster-General, one accountant, six clerks, six letter-carriers, and one office-keeper, or fifteen persons in all. Within the borders of New South Wales, which at that time included Victoria and Queensland, there were forty post offices, and the revenue of the Department for the year was £8,390, and the expenditure £10,357. The New South Wales Government also made payments to the post office at Kororareka, in New Zealand, which was not created a separate colony until 1841. Mail communication between Sydney and Adelaide was established in 1847, and the rate of postage on a single letter was fixed at 1s. 6d. An amendment of the Postal Act was made in 1849, during Sir Charles Fitzroy's vice-royalty, when the postage on town letters was fixed at 1d., and on inland letters at 2d., while the postage on ship letters was 3d., in addition to the inland rate. Authority was given for the use of postage stamps in their present form, and the privilege of franking was abolished; petitions to the Queen, the Governor, and the Executive and Legislative Council being the only communications allowed to pass free through the post.

The history of the post office, subsequent to the discovery of gold in 1851, has been one of progress and improvement. The Postmaster-General was originally a non-political officer, as the Registrar-General and the Auditor-General are at present.

The first annual report of the Department was laid before Parliament in the year 1855, and at that time there were 155 post offices in the State. The head office was in George-street, occupying the same site as the present edifice, but the building was small and inconvenient. At that time there were no electric telegraphs in the State, and the Observatory, by means of flags and semaphores, signalled the arrival of vessels at the Heads. Prior to the opening of the first railway, in September, 1855, the Southern and Western mails used to leave the General Post Office in old-fashioned mail-coaches every evening. During that year the total number of miles travelled by the postal contractors, by coach and on horseback, was 1,023,255. The number of letters passing through the post office was 2,114,179, of which 617,041 are described as "foreign," or, in other words, were addressed to places beyond the State. The number of newspapers was 2,100,989, of which 1,281,613 were inland, and 819,376 were "foreign." Book parcels and packets were not reckoned separately, but were counted as letters. Ten petitions to the Governor or the Council were conveyed free during the year. The revenue of the Department for the year was £24,902, and the expenditure was £60,221. The staff numbered 223 officers, of whom fifty-six were connected with the office in Sydney. The annual report also indicates that communication with Victoria was effected not less than three times a week.

In the year 1856 the first iron pillar letter-receivers were erected in Sydney, and 22 miles of railway were utilised for postal purposes, 16½ miles being added in the following year. The number of letters delivered in Sydney in 1856 was 1,336,032, and in the country 1,481,416, being an average of about 10½ to every person in the community. During 1857 there were 86,914 registered letters and 7,873 oz. of gold sent through the post as against 23,712 oz. in the previous year. The postal revenue for 1857 amounted to £35,716, of which £34,031 was derived from the sale of stamps. The expenditure amounted to £63,865, out of which sum the conveyance of mails within the State absorbed £41,324, without taking into consideration £20,000 towards the subsidy for the conveyance of English mails. In his report for 1857 the Postmaster-General was compelled to admit that the mail contract for the conveyance of mails between Australia and the United Kingdom had proved "an utter failure, so far as the stipulated time-table might be taken as a criterion." Only ten monthly mail-steamers arrived that year, and but one to contract time; while only eleven were despatched. The time allowed was fifty-eight days from Southampton to Sydney, and fifty-six days from Sydney to Southampton.

As an indication of the marvellous growth of this service, it is pointed out that while in 1855 there were only 155 post-offices within the area now comprised in New South Wales and Queensland, at the close of 1905 there were within this State 1,744 post-offices, besides 522 receiving offices. The number of miles travelled by the mail in the former year was 1,023,255, while the distance covered in 1905 aggregated 11,989,968, exclusive of railways. But while the number of miles travelled by the mails in 1905 was over 11 times that travelled in 1855, the number of letters passing through the Post Office during the same period had increased over 48 times, and the number of newspapers over 21 times. Packets and book parcels were first enumerated separately in 1858, during which year 68,564 passed through the post, while in 1905 the number was 22,082,950. Post-cards were first introduced in 1876, when the number sent was 128,786; in 1905, however, no less than 8,382,282 passed through the Post Office, of which 5,095,008 were posted within the State.

Double cards, which are designated letter-cards and closed against inspection, were introduced for public use on the 1st July, 1894. These cards may be transmitted within the State, as well as to Victoria, Queensland, South Australia, Western Australia, Tasmania, New Zealand, Fiji, and British New Guinea. The number carried up to the end of 1894 was 153,700. In 1905 the total number that passed through the office was 1,283,418.

A parcels post, for inland and inter-State transmission, was inaugurated on the 1st October, 1893, the maximum weight being fixed at 3 lb. and 11 lb., according to mode of conveyance. The number of parcels carried under this system up to the close of the year was 44,265, while during

1894, 349,218 were carried. Under the foreign system, which has been in force since August, 1886, 19,437 parcels were carried in 1893, and in the following year 18,672. In 1905 the total number of parcels carried was 994,144,of which 788,183 were inland, 146,797 inter-State, and 59,164 foreign.

Regular steam communication with England was first established in 1852. Prior to that time the State had to depend upon the irregular arrival and despatch of sailing vessels, but in the year mentioned the steamships Australia, Chusan, and Great Britain were despatched from England, making the voyage in 60 days, and causing a strong desire in the minds of the colonists for a more frequent and steady system of communication with the Old World. The outbreak of the Crimean War in 1854 hindered the accomplishment of this object for a while, but in 1856 a line of steamers was again started, and the service was carried on by the Peninsular and Oriental Company and the Royal Mail Company for some years, without, however, giving so much satisfaction to the public as might have been expected.

As far back as 1854 a proposal was made for the establishment of a line of mail packets *via* Panama, and negotiations on the subject were carried on for several years between the British Government and the Governments of New South Wales and New Zealand. The result was that in 1866 the line was started, and continued in operation until the end of 1868, when it was terminated through the failure of the company by which it had been carried out. In the following year this State, in conjunction with New Zealand, inaugurated a mail service *via* San Francisco, and subsidised the Union Steamship Company, in conjunction with the Pacific Steamship Company, for a four-weekly service, to the amount of £37,000, of which New South Wales paid £25,750 and New Zealand £11,250; this continued until November, 1890. Under the new contract which was entered into, the amount of the subsidy was largely reduced, the contribution being based on the weight of mail matter carried, and New South Wales made an annual payment of £4,000 to the New Zealand Government, subject to appropriation by Parliament. Various extensions of the contract have been made, and at present the New Zealand Government is working under an agreement with the J. D. Spreckels Company (the Oceanic Steamship Company of San Francisco), which expires on the 10th November, 1906; but New South Wales also takes advantage of this route for the despatch of mails.

The establishment of a mail route *via* America had the effect of stimulating the steamship owners who were engaged in the service *via* Suez, and from that time there was a marked improvement in the steamers laid on, as well as in the punctuality and speed with which the mails were delivered. The Peninsular and Oriental Company have, with very few interruptions, carried mails from the Australian States almost from the inception of the ocean steam service. Towards the end of 1878 the Orient Company commenced carrying mails between Australia and the United Kingdom, and has continued to do so ever since. More recently the steamers of the Messageries Maritimes of France and the North German Lloyd have entered the service between Europe and Australia.

During 1893 direct communication was established between Sydney and Vancouver, British Columbia, the New South Wales Government undertaking to pay an annual subsidy of £10,000 for the maintenance of this service for a period of three years. In May, 1896, this agreement was renewed for a further period of three years. The agreement was afterwards renewed for a further period of four years, on similar terms and conditions, except that the route was *via* Brisbane instead of

Wellington. The contract having expired on the 31st April, 1903, a fresh one was entered into for a period of two years, at an increased subsidy. This agreement was further extended for a period of three months to the 31st July, 1905, and afterwards for a further period of one year, from the 1st August, 1905, at a further increased subsidy from the Commonwealth of £26,626 per annum, and the right to an extension of time of one year. Contracts were made in 1895 by the Imperial Government with the Peninsular and Oriental and the Orient Companies for the extension of the mail service until the 31st January, 1898; and in the beginning of 1897 a new contract was made, determinable on the 31st January, 1905, to take effect from 1st February, 1898, the maximum time for delivery of the mails between Sydney and London being reduced. The failure on the part of the Commonwealth Government to obtain suitable offers for the carriage of Australian mails to England, necessitated the introduction of the poundage system on the termination of the contract.

An agreement between the Commonwealth Government and the Orient-Pacific Steamship Company, which came into force on the 4th April, 1905, and continues until the 31st January, 1908, arranges for a fortnightly service of mail steamers to and from the United Kingdom. The period of transit of the steamers in either direction between Naples and Adelaide has been fixed at 696 hours. The shipping company binds itself to employ only white labour on vessels employed under the agreement, and the Commonwealth Government pays a yearly subsidy of £120,000 for the service. Mail matter forwarded by other lines of steamers is paid for at poundage rates. The mails of New South Wales are now carried by six lines of steamers—four going by way of Suez, one *via* San Francisco, and one *via* Vancouver. Two mails are received and despatched every week. The American, French, and the German steamship companies do not receive subsidies from the Commonwealth Government.

On the 7th July, 1906, an agreement was entered into between the Commonwealth Government and Sir Jas. Laing and Sons (Limited) for the conveyance of mails to and from Adelaide and Brindisi. The service is to commence on the 1st February, 1908, and, subject to certain conditions, will be carried on for a period of ten years. Each of the steamers employed must be at least of 11,000 tons registered tonnage, and capable of steaming at a minimum speed of 15 knots per hour. The time to be occupied on each voyage either way is 636 hours; but it can be reduced, on request of the Postmaster-General, to 612 hours. For carrying the mails at the ordinary speed the company is to receive an annual subsidy of £125,000, the amount to be increased by £25,000 when the accelerated service is provided.

The progress made in regard to the means of postal communication with the United Kingdom and the continents of Europe and America is also marvellous. Instead of the unsatisfactory ocean mail service of 1857, which nominally brought monthly mails, with news 58 days old, there are now four great lines of ocean steamships, which bring mails *via* the Suez Canal at least once a week, the time occupied in the conveyance of the mails averaging 33 days. In addition, there is another mail service *via* San Francisco, which averages 34 days in transit between London and Sydney, and arrives and departs tri-weekly; also a monthly service *via* Vancouver, by which mails are sent from Sydney to London in 37 days. There was also a steam service with London *via* Torres Straits, and advantage was at one time taken of these vessels to send mail matter. This route, however, was but little used by New South Wales. The following table shows, as far as possible, the average time and quickest time occupied in the transmission of letters by various routes between London and Sydney during 1905:—

Service.	London to Sydney.		Sydney to London.	
	Average Time.	Quickest Time.	Average Time.	Quickest Time.
	days.	days.	days.	days.
Per Peninsular and Oriental S. N. Co., *via* Colombo and Brindisi	31 6/13	31	31 1/13	31
„ Orient-Pacific S. N. Co., *via* Suez and Naples...	33¼	33	33½	32
„ Canadian-Australian, *via* Vancouver..............	37 1/13	37	37	34
„ Oceanic S.S. Co., *via* San Francisco	35 11/17	34	34½	33
„ Messageries Maritimes, *via* Marseilles	...	...	34 11/13	33
„ Nord-Deutscher Lloyd, *via* Genoa..................	...	...	35½	33

The contribution paid by New South Wales towards the cost of the "Federal" Ocean Mail Service (P. and O. and Orient-Pacific Companies), the contract for which terminated on the 31st January, 1905, was £2,183, and the net revenue is estimated to be £61. The New South Wales proportion of the subsidy towards the contract between the Commonwealth and the Orient-Pacific Company (which commenced at Adelaide on the 13th April, 1905) was £31,706, and the net cost is estimated to be £23,715.

The approximate net cost to New South Wales of the Federal Ocean Mail Service *via* Suez, the San Francisco Service, and the Vancouver Service, for the years 1900 to 1905, may be gathered from the following statement:—

Service.	Estimated Net Cost.					
	1900.	1901.	1902.	1903.	1904.	1905.
	£	£	£	£	£	£
Suez (per Peninsular and Oriental and Orient-Pacific Companies)	4,966	1,371	3,409	3,491	2,928	†61
Suez (per Orient-Pacific Company)	...	...	...	...	...	23,715
San Francisco (per Union S.S. Co. of New Zealand, Ltd.) and Oceanic S.S. Co. of San Francisco	1,188	*...	*...	*...	*...	*...
Vancouver (per Canadian-Australian Line)	7,619	8,330	8,162	8,757	11,420	9,442

* Ceased to be a New South Wales contract service. † Net revenue.

The contract with the Union Company expired in October, 1900; but the vessels of the Oceanic S.S. Co. of San Francisco carry mails from New Zealand, under an agreement with the New Zealand Government. The steamers of this company are used by the New South Wales postal authorities for the conveyance of mails from Sydney at regulation poundage rates.

A monthly service for transport of mails between Sydney, Lord Howe Island, Norfolk Island, New Hebrides, and Banks Islands, and a quarterly service between Sydney, Solomon, Samarai (New Guinea), New Britain, and Shortland Islands, and a four-monthly service between Sydney, Ellice and Gilbert Islands, *via* Vila (New Hebrides), is provided by Burns, Philp, & Co., Ltd. For these services the company receives a subsidy of £12,000.

In the year 1865 the office of Postmaster-General was made a political one, at first without, and subsequently with, a seat in the Cabinet. The old Post-office building in George-street was found so small and inconvenient that it was resolved to build a larger and more commodious edifice on the same site, and, in 1863, the business of the Department was removed to a temporary wooden building in Wynyard Square. It was not until 1873 that the construction of the new building was sufficiently advanced to allow of the officers removing from the crowded and ill-ventilated structure in Wynyard-square, where they had carried on their business under great disadvantages and difficulties, to the present palatial structure, which is in every respect a credit to the State. The head-quarters of the Electric Telegraph Department, the Central Telephone Exchange, and the Money Order and Postal Note Office are in the same building. The table given below shows the operations of the Post Office in five-year periods from 1855 to 1885, and annually since that date to the end of 1905. For 1885 and succeeding years the number of persons employed and the income and expenditure refer to the Department as a whole; prior to that year the figures refer to the Post Office only. Also, from 1885, the income is exclusive of interest on Savings Bank investments, and interest due on uninvested Savings Bank balances in the Treasury; and the expenditure is exclusive of interest allowed to Savings Bank depositors:—

Year.	Post Offices.	Receiving Offices.	Persons employed in the Department.	Extent of Postal Lines.				Distance actually travelled.	Cost of conveyance of Mails, Foreign and Inland.	Income.	Approximate Expenditure.
				Railway, Tramway, and Steamer.	Coach.	Horse.	Total.				
	No.	No.	No.	miles.	miles.	miles.	miles.	miles.	£	£	£
1855	156	8	223	*	*	*	*	1,023,255	45,412	24,902	69,221
1860	289	*	289	61	1,757	6,413	8,231	1,461,518	44,303	45,618	71,391
1865	435	*	513	141	2,528	9,323	11,992	2,521,212	49,840	70,985	88,659
1870	562	*	690	339	3,865	10,038	14,242	3,062,458	48,649	84,441	86,722
1875	752	7	967	435	5,407	11,829	17,671	3,787,757	138,912	107,761	196,368
1880	927	119	1,526	891	8,717	12,819	22,427	5,246,373	174,238	194,084	268,128
1885	1,115	202	3,295	1,797	11,736	13,150	26,683	6,621,996	226,105	485,489	573,617
1886	1,157	217	3,168	1,948	12,540	12,606	27,094	6,891,200	233,723	503,046	608,784
1887	1,167	263	3,227	2,074	13,305	12,135	27,514	7,015,600	264,886	521,564	627,151
1888	1,208	288	3,387	2,219	14,411	11,530	28,160	7,144,500	248,403	570,800	613,566
1889	1,261	305	3,676	2,263	14,914	11,541	28,718	7,299,400	212,725	598,394	618,852
1890	1,333	325	3,821	2,273	15,774	11,547	29,594	7,463,000	231,467	637,976	677,216
1891	1,384	344	4,070	3,085	16,370	11,802	31,257	8,235,000	207,357	661,008	687,226
1892	1,423	377	4,478	3,217	17,467	11,616	32,300	8,568,700	210,426	652,368	740,118
1893	1,423	404	4,845	3,412	18,380	11,000	32,792	8,784,600	209,792	643,569	788,500
1894	1,445	450	4,982	3,473	19,331	10,260	33,064	8,840,000	214,670	626,864	763,976
1895	1,470	502	5,063	3,473	19,545	10,675	33,693	9,338,000	210,354	648,352	763,259
1896	1,508	503	4,814	3,516	20,309	10,258	34,083	9,773,000	208,619	695,627	748,841
1897	1,536	510	4,936	3,579	20,472	10,393	34,444	10,333,500	212,150	713,700	713,015
1898	1,578	520	5,046	3,644	21,214	10,103	34,961	11,003,500	209,413	761,248	715,068
1899	1,626	526	5,251	3,673	21,832	10,235	35,740	11,638,500	210,381	789,657	734,548
1900	1,668	521	5,516	3,796	22,708	9,796	36,294	11,925,600	213,924	831,340	764,227
1901	1,684	524	5,636	3,970	24,205	9,044	37,219	12,117,900	226,456	870,068	790,783
1902	1,693	523	5,724	4,066	24,063	7,916	36,045	12,042,300	180,394	894,514	759,619
1903	1,708	520	5,726	4,123	24,253	7,624	36,000	11,986,800	225,078	912,612	884,963
1904	1,726	513	5,763	4,248	24,330	7,684	36,262	11,990,800	227,949	972,757	920,390
1905	1,744	522	5,890	4,275	24,424	7,781	36,480	11,989,968	261,424	1,022,380	970,808

* Not recorded.

It will be noticed that, until 1897, the Postal Department was carried on at a considerable annual loss to the State. This was due in a great measure to the wide area over which the population of the country is scattered necessitating a proportionately large expenditure for the carriage of mails, and also to the fact that newspapers, which form the bulk of the mail matter, were then carried free. But it has always been held that the safe and regular despatch and delivery of the mails is an item of too much importance in the political, commercial, and social life of the State to be neglected, even though it should entail a heavy charge upon the general revenue.

In the expenditure shown in the table, interest on the outlay on post office buildings and telegraph lines, and maintenance of buildings, is not taken into account. If allowances be made for these, a deficiency in the finances of the Department would be disclosed.

The revenue of the Department for 1905 included the following amounts:—Postage, £676,994; electric telegraphs, £150,830; telephones, £127,514; money order commission, £19,651; poundage on postal notes, £14,262; fees for private bags and boxes, collections from other Governments, and miscellaneous receipts, £33,079. The expenditure for the year comprised:—Salaries, £493,449; contingencies, £144,256; conveyance of mails, £261,424; cable subsidies, &c., £20,043; telegraph and telephone works, £31,383; rent, £8,743; repairs and maintenance of buildings, £8,068; fittings and furniture, £1,728; sanitation and water supply, £1,714. Exclusive of 1,029 mail contractors, 5,890 persons were employed by the Department. The following return will give an idea of the magnitude of the work done by the Post Office of New South Wales:—

Year.	Letters.		Post-cards.	Newspapers.		Packets & Book Parcels.		Parcels.
	Beyond the State.	Inland.		Beyond the State.	Inland.	Beyond the State.	Inland.	
	No.	No.	No.	No.	No.	No.	No.	No.
1855	617,041	1,497,138	......	819,376	1,281,613	‡......	‡......	....
1860	868,746	3,362,015	......	910,478	2,758,305	12,196	71,540	....
1865	1,106,045	5,222,308	......	1,028,954	3,660,904	28,852	221,052	....
1870	1,103,200	5,980,300	......	1,206,600	2,608,100	36,700	121,000	....
1875	1,719,100	11,998,800	......	1,385,900	4,876,700	82,300	274,700	....
1880	2,776,000	18,956,500	153,360	2,381,200	11,409,800	146,600	565,000	....
1885	5,328,200	34,023,000	341,000	3,987,900	21,579,500	552,600	2,894,200	....
1886	5,582,700	37,267,200	348,700	4,276,300	†23,210,000	865,800	3,983,000	....
1887	5,624,000	39,221,900	442,100	4,744,400	†25,617,600	980,800	4,549,900	....
1888	6,202,800	42,783,200	520,920	5,255,000	28,500,400	1,041,600	5,560,300	....
1889	6,346,700	47,624,600	630,100	5,599,000	30,931,800	1,305,000	6,564,400	....
1890	8,109,300	54,908,400	677,400	6,949,900	33,647,300	2,214,300	6,725,300	21,300
1891	9,145,600	59,033,000	808,700	7,233,400	35,283,900	2,902,100	8,166,400	25,700
1892	11,549,600	65,025,800	827,360	9,529,300	35,991,200	3,274,900	9,105,300	23,000
1893	10,616,500	66,924,000	850,420	9,055,600	35,872,300	3,287,100	8,773,500	63,700
1894	11,125,500	56,867,800	§1,170,000	9,503,900	32,163,400	5,654,200	7,919,400	367,900
1895	11,974,300	56,104,700	§1,294,700	9,235,800	35,667,100	4,206,200	7,053,000	422,800
1896	12,468,900	56,426,300	§1,406,500	9,324,000	36,234,300	6,306,000	9,297,600	506,100
1897	13,977,000	58,513,200	§1,534,700	8,457,600	33,968,800	3,481,900	9,236,800	539,500
1898	14,735,000	60,384,600	§1,862,100	8,908,300	33,662,600	3,955,700	12,541,600	596,400
1899	14,374,900	60,311,200	§2,040,600	9,525,500	37,281,100	2,056,300	11,930,300	654,500
1900	14,452,700	62,908,900	§2,241,100	9,349,100	42,151,800	2,593,600	11,253,100	711,700
1901	14,612,000	65,689,700	§2,481,800	10,745,700	41,572,000	3,018,300	11,461,600	736,500
1902	14,641,700	73,435,500	§2,704,300	9,987,700	37,775,700	3,080,600	13,129,300	785,500
1903	14,558,600	74,598,400	§3,081,300	10,174,800	27,726,000	3,225,600	12,245,500	834,300
1904	16,735,400	77,016,700	§4,518,100	12,100,700	28,284,100	4,790,000	13,770,500	924,900
1905	17,858,000	84,434,900	§9,665,700	14,295,700	30,303,400	5,315,000	16,768,000	994,100

† Estimated. ‡ Included with letters. § Inclusive of letter-cards.

The progress exhibited by the table just given is astonishing. In 1855 the total number of letters and newspapers, inland and foreign, was only a shade over 2 millions each, whereas in 1905 the number of letters and post-cards had grown to nearly 112 millions, and newspapers to over 44 millions, without reckoning more than 22 million packets and book parcels which, in the year first mentioned, were included with the letters. The enormous increase in the number of post-cards carried during the last few years is, of course, mainly due to the introduction of the pictorial post-card, the passion for collecting which seems to have invaded all classes of society.

The charge on letters between the Commonwealth States and the United Kingdom, which had for a long period been at the rate of 6d. per half-ounce *via* Italy, and 4d. by the long sea route, was reduced in 1891 to 2½d., and a further reduction was made in 1905 to 2d. for a letter sent to the United Kingdom, whilst a letter from the United Kingdom can be posted to the States of the Commonwealth for 1d. By an arrangement made at the Postal Congress held in Vienna in the middle of 1891, New South Wales, as well as the other provinces of Australasia, entered the Universal Postal Union on the 1st October, 1891. The effect of this has been to extend the reduced rate to all countries embraced in the Union. The letters posted in New South Wales for countries outside Australasia increased from 986,400 in 1891 to 1,101,000 in 1892, the newspapers from 793,600 to 873,100, and packets from 142,000 to 194,900; but in 1905 the number of letters had increased to 1,762,215, newspapers to 968,262, while parcels and packages had increased to 541,299, and there were also 570,522 post-cards.

Uniformity in postage rates has long been desired, and an attempt was made to secure it by the introduction of the Penny Postage Bill of 1906. The measure, however, failed to secure final parliamentary approval.

By an enactment made in June, 1893, it is required that newspapers be registered at the General Post Office, and both newspapers and supplements must be printed in New South Wales, from type set up therein, in order to entitle them to transmission as newspapers. This provision is continued under the Post and Telegraph Act, 1901, passed by the Commonwealth Legislature, and assented to on the 16th November, 1901.

Newspapers are transmitted to any place within the Commonwealth, New Guinea, New Zealand, and Fiji, at the rate of ½d. for every 10 oz. or fraction thereof, and to all other places at the rate of 1d. for each newspaper not exceeding 4 oz. in weight, with ½d. for every additional 2 oz. or fraction thereof.

The following table shows the number of registered letters dealt with during the last ten years in the State:—

Year.	Number.	Year.	Number.
1896	951,025	1901	1,213,277
1897	998,304	1902	1,095,095
1898	1,054,045	1903	928,521
1899	1,038,768	1904	901,235
1900	1,023,974	1905	964,294

Of the registered letters in 1903, 1904, and 1905, there were respectively 218,244, 245,019, and 240,752 from and to places beyond the State, and 710,277, 656,216, and 723,542 inland.

Compared with the other States of the Commonwealth, with New Zealand, and with the United Kingdom, New South Wales occupies a favourable position as regards the number of letters, post-cards, and newspapers carried per head of population, as may be seen from the following table:—

Country.	Number per head of population.		Country.	Number per head of population.	
	Letters and Postcards.	Newspapers.		Letters and Postcards.	Newspapers.
New South Wales	75·7	30·2	New Zealand................	81·4	25·4
Victoria	98·7	31·4	Australasia	69·4	25·4
Queensland	48·3	27·7	United Kingdom	77·7	4·1
South Australia	77·6	21·3	England and Wales	83·6	4·0
Western Australia.........	79·2	36·6	Scotland......................	67·6	4·6
Tasmania	59·9	40·4	Ireland	42·5	4·6

New postal routes to the extent of 386 miles were opened during 1905, while 216 miles of routes were abandoned.

TELEGRAPHS.

The electric telegraph was first used by the public of New South Wales on the 26th January, 1858, when the line from Sydney to Liverpool, 22 miles in length, was brought into operation. From this small beginning the system has increased until in 1905 there were 1,069 stations, and 14,827 miles of lines open, carrying 71,086 miles of wire in actual use. The following table gives a view of the business of the Telegraph Branch of the Post Office from 1865 to 1905:—

Year.	Telegraph Stations.	Telegrams transmitted, delivered, and in transit.	Actual Revenue received.	Lines.	Wires.	Cost of construction, including Telephone installation.
	No.	No.	£	miles.	miles.	£
1865	55	*138,785	29,769	....	2,989	145,446
1870	86	*173,812	28,550	....	5,247	195,545
1875	137	*719,745	48,657	....	8,012	253,391
1880	289	1,319,537	84,110	....	13,188	462,226
1885	404	2,625,992	155,073	....	19,864	641,669
1886	425	2,661,126	158,128	....	20,797	666,028
1887	434	3,258,733	164,511	....	21,444	684,600
1888	460	3,936,830	185,965	....	22,219	704,912
1889	485	3,932,670	186,862	10,732	22,606	713,663
1890	628	4,101,449	193,707	11,231	23,598	743,698
1891	674	4,046,251	191,319	11,697	24,780	767,872
1892	706	2,976,109	185,014	11,905	26,443	801,918
1893	724	2,853,691	157,482	12,097	27,326	820,822
1894	813	2,464,074	147,903	12,201	28,085	831,471
1895	834	2,635,456	145,901	12,316	28,799	840,380
1896	856	2,796,776	159,741	12,418	30,820	889,476
1897	886	2,728,360	155,162	12,778	33,073	932,412
1898	916	2,866,570	158,062	13,242	35,630	989,423
1899	945	3,112,063	168,758	13,663	38,718	1,051,987
1900	961	3,219,907	174,895	14,065	41,494	1,132,626
1901	978	3,449,315	186,135	14,272	46,153	1,204,528
1902	983	3,627,369	183,855	14,356	58,907	1,237,442
1903	987	3,638,591	153,018	14,395	62,356	1,283,150
1904	1,005	3,637,280	151,036	14,491	67,058	1,328,818
1905	1,069	3,837,962	156,956	14,827	71,086	1,434,017

* Number despatched only.

The number of telegrams received and despatched during the year, inland telegrams being counted once only, amounted to 3,576,045, or 2·42 per head for every individual of the population.

The state of telegraphic construction in the principal countries of the world at the latest available dates is given herewith. The figures are interesting, though the circumstances of Australasia and the older countries are so dissimilar as to make a comparison between them interesting rather than valuable:—

Country.	Length in Miles—		Country.	Length in Miles—	
	Of Line.	Of Wire.		Of Line.	Of Wire.
Australasia	53,583	161,812	Italy	27,643	108,915
Argentine	29,377	58,656	Japan	16,468	84,331
Austria-Hungary	39,432	189,317	Mexico	45,200	......
Belgium	4,104	22,262	Netherlands	4,210	15,383
Brazil	15,150	29,310	Norway	8,587	54,057
Canada	37,481	100,137	Portugal	5,313	12,030
Cape Colony	7,966	30,720	Russia	93,070	270,413
Chili	11,060	68,710	Spain	17,883	42,694
Denmark	3,849	14,439	Sweden	14,450	18,023
France	76,480	255,687	Switzerland	3,890	14,004
Germany	89,014	365,498	Turkey	25,700	39,800
Greece	3,915	5,895	United Kingdom	52,518	589,839
India (inclusive of Native States).	59,692	212,330	United States	199,350	1,155,405

TELEGRAPH RATES.

The rates for the transmission of telegrams within New South Wales and to the other States of the Commonwealth were determined by the Post and Telegraph Rates Act, 1902, and came into force on the 1st November, 1902. For ordinary telegrams not exceeding sixteen words, including the address and signature, the charges are 6d. in town and suburban districts within prescribed limits or within 15 miles of the sending station, 9d. to other places within the State, and 1s. for messages sent to any other State of the Commonwealth; in each case an extra charge of 1d. is made for each additional word. Double rates are imposed for the transmission of telegrams on Sunday, Christmas Day, and Good Friday, and between the hours of 8 p.m. and 9 a.m., and for urgent telegrams.

CABLE SERVICES.

At a Conference of the Postal and Telegraph authorities held in Sydney in March, 1891, New South Wales, Victoria, South Australia, Western Australia, and Tasmania undertook to make good half the loss which the

Eastern Extension Telegraph Company might sustain by a reduction in the schedule of cable charges. The amount to be guaranteed to the Company for the time during which the contract was in existence was one-half of the amount of receipts short of the sum of £237,736 (the amount of the Company's receipts in 1889, after deducting outpayments), the other half of the loss to be borne by the Company. The amended cable rates came into force in May, 1891. For European messages the rates were reduced from 9s. 4d. to 4s. 2d. per word for ordinary messages from Sydney, from 7s. 1d. to 3s. 8d. per word for Government messages, and from 2s. 8d. to 1s. 10d. per word for Press messages, proportionate reductions being made for messages to countries other than those in Europe. By a further agreement, dated November, 1892, the contracting States decided to contribute towards such sum required to bring the revenue of South Australia on international telegrams up to £37,552. The combined guarantees cost New South Wales in 1892 the sum of £15,397. A conference held in Melbourne decided, in view of the heavy loss to the States, to increase the rate for ordinary messages to 4s. 9d. per word from Melbourne, equal to 4s. 11d. from Sydney. The new rates came into force on the 1st January, 1893, concurrently with an arrangement under which New Zealand became a contributor, on the same terms, towards the guarantees to the Company and South Australia in connection with the reduction in the international rates.

From May, 1893, to April, 1894, the amount paid by New South Wales to the Cable Company in respect of the guarantee in connection with the reduced rates mentioned above, was £2,056, £273 also being paid to South Australia. The total contribution for that year in respect of all cable services was £21,862; the amount paid by the State for the year ended 30th April, 1895, was £21,598. In the following year the amount was £18,167; in 1897, £17,710; in 1898, £17,512; in 1899, £15,185; in 1900, £3,731; in 1901, £3,494; in 1902, £1,993; in 1903, £12,028; in 1904, £11,613; and in 1905, £10,530. The payments to the Cable Company, the South Australian Government, the Tasmanian subsidy, and the New Zealand Guarantee have now disappeared, New South Wales being only charged with the proportion of the New Caledonian and Pacific Cable guarantees. The contributions which New South Wales was called upon to pay were, for the twelve months ended 31st December, 1905:—Queensland-New Caledonian Guarantee, £2,000; Pacific Cable Guarantee, £8,530; total, £10,530.

In the month of April, 1892, an agreement was entered into between New South Wales and the Société Française des Télégraphes Sousmarins (now known as the Compagnie Française des Cables Télégraphiques), by which the latter undertook to lay down a submarine cable, for the purpose of establishing telegraphic communication between Queensland and New Caledonia, in consideration of the payment by New South Wales (Queensland having agreed to contribute a like amount), of an annual sum for a period of thirty years, at the rate of £2,000 a year, or such smaller sum as shall, together with one-sixth of the net amount received by the Company for messages during the year, after deducting working expenses—not exceeding £2,400—amount to £2,000. Provision was made that the Government should have the use of the cable for official messages up to this amount. In October, 1893, the cable was opened.

The desirableness of constructing a Pacific cable, which shall touch only British territory on its way from Australia to America, was acknowledged by the Governments of most of the Australasian States, as well as by those of the United Kingdom and Canada, and an informal Conference was held in London in July, 1898, of representatives of Great Britain, Canada, New South Wales, Victoria, Queensland, South Australia, and New Zealand, when it was suggested that Great Britain should pay one-third of the cost of laying such a cable, Canada two-ninths, and the Australasian States the remaining four-ninths. This proposal was eventually adopted, and in July, 1899, a meeting was held in London by the representatives of the countries interested, and it was agreed that the cable should be laid, and that the capital necessary to construct and manage it should be raised and controlled by a Board designated the Pacific Cable Board, comprising Sir Spencer Walpole as President, representing the United Kingdom; Lord Strathcona, Canada; and the Australian Agents-General their respective States. A contract was entered into with the Telegraph Construction and Maintenance Company of Greenwich, and the Australian shore-end of the cable was laid at Southport, Queensland, on the 13th March, 1902, and the cable was completed to Vancouver, and opened for traffic on the 3rd November, 1902. The cable comprises four sections, with a branch to New Zealand from Norfolk Island, the length of the section being:—Brisbane to Norfolk Island, 834 nautical miles; Norfolk Island to Fiji, 961 miles; Fiji to Fanning Island, 2,093 miles; and Fanning Island to Vancouver, 3,240 miles; the branch from Norfolk Island to New Zealand measuring 537 miles.

From the report of the Pacific Cable Board for the year ended 31st March, 1906, it appears that a sum of £1,997,708 had been expended upon the cable. The gross revenue from messages for the year was £99,457, from which has to be deducted £2,642, being the sum paid to the Atlantic and Canadian Pacific Telegraph Companies for supplying the date and the time of filing all messages to and from the United Kingdom and the Continent, and for delivering messages in duplicate in London and some other large centres in the United Kingdom, leaving the net message revenue at £91,815. The actual expenditure of the Board for the year amounted to £51,605. After making provision for interest, the actual deficit on the year's transactions amounted to £72,556, which is recoverable in the following proportions:—England, £20,154; Canada, £20,155; Australia, £24,185; New Zealand, £8,062.

The direct Cape cable, from Durban to Fremantle, which provides an alternative all-British route to that of the Pacific, was completed on the 19th October, 1901.

The following table shows the amount of outward business transacted by New South Wales with Europe and the East during the last ten years. Compared with 1896, the year 1905 shows an increase of 57,941 messages, and of £18,202 in revenue:—

Year.	Cable Messages sent from New South Wales.	Amount received.	Year.	Cable Messages sent from New South Wales.	Amount received.
	No.	£		No.	£
1896	24,578	71,052	1901	43,005	90,716
1897	26,390	72,362	1902	79,805	84,368
1898	22,762	67,055	1903	78,795	78,197
1899	31,720	83,365	1904	76,713	78,406
1900	35,740	97,888	1905	82,519	89,254

The number of cablegrams despatched from each of the Commonwealth States and New Zealand in 1905, the number received, and the cost of the messages are given below:—

State.	Forwarded.		Received.		Total.	
	Messages.	Cost.	Messages.	Cost.	Messages.	Cost.
	No.	£	No.	£	No.	£
New South Wales	82,519	89,254	81,548	71,044	164,067	160,298
Victoria	59,179	74,285	55,749	‡	114,928	......
Queensland	7,961	12,417	6,455	9,386	14,416	21,803
South Australia	13,084	16,328	15,939	27,164	29,023	43,492
Western Australia	14,504	17,497	10,446	‡	24,950	......
Tasmania	92,996	14,046	101,666	11,110	194,662	25,156
Commonwealth	270,243	223,827	271,803	......	542,046	......
New Zealand	93,004	52,062	86,265	*2,255	179,269	†54,317
Total	363,247	275,889	358,068	......	721,315	......

* Represents cost of 4,548 Press messages only. † No record has been kept of the value of inward traffic other than Press. ‡ Not recorded.

TELEPHONES.

In connection with the Telegraph Department of the State, telephone exchanges have been established in the metropolis and other important centres of population.

The total number of lines connected with the telephone system on the 31st December, 1905, was 14,983, of which 12,278 were in Sydney and suburbs, and 2,705 in the country. There were 64 telephone exchanges, and the number of telephones in use was 18,616. The length of wire used in the transmission of messages cannot be accurately stated, as the telegraph wires are largely used for communication by telephone; but the approximate length of telephone line open at the end of 1905 is given as 22,111 miles. Some particulars regarding telephones in the Commonwealth States and New Zealand in 1905 will be found in the following table:—

State.	Exchanges.	Telephones.	Length of Wires (distinct from Telegraph Wires).	Revenue.
	No.	No.	miles.	£
New South Wales	64	18,616	22,111	127,514
Victoria	24	9,259	28,980	102,396
Queensland	19	4,210	7,697	31,765
South Australia	11	2,284	5,383	25,786
Western Australia	16	4,857	6,494	33,995
Tasmania	16	1,441	1,371	11,108
Commonwealth	150	40,667	72,036	332,564
New Zealand	101	15,333	12,798	89,542
Total	251	56,000	84,834	422,106

POPULATION.

The Colony of New South Wales was established by Captain Phillip, who arrived in Sydney Harbour on the 26th January, 1788, accompanied by about 1,030 people, all told. In the succeeding years the population increased and settlement spread, and there were off-shoots from the parent Colony. Tasmania was constituted in 1803, Victoria in 1851, and finally, Queensland was separated in 1859.

The first census taken after New South Wales was restricted to its present limits was on the 7th April, 1861, when the population was 350,860. The last census was taken on the 31st March, 1901, when the population had increased to 1,359,133. The population at each census period from 1861 to 1901 will be seen below, and, in addition, the estimated population as at the 31st December, 1906, is shown. The figures are inclusive of aboriginal natives :—

Year.	Males.	Females.	Total.
1861	198,488	152,372	350,860
1871	275,551	228,430	503,981
1881	411,149	340,319	751,468
1891	612,562	519,672	1,132,234
1901	712,456	646,677	1,359,133
1906	816,590	714,394	1,530,984

The relative increase from census to census, and up to the end of 1906, may be measured according to any of the methods shown in the following statement. In the first column, the population in 1861 is called 100 :—

Year.	Growth of Population.	Total Increase per cent.	Increase per cent. per annum.	Persons per square mile.
1861	100	......	......	1·12
1871	144	43·64	3·69	1·61
1881	214	49·11	4·08	2·41
1891	323	50·67	4·19	3·64
1901	387	20·04	1·84	4·38
1906	436	12·64	2·41	4·93

It will be seen that the population has increased more than fourfold since 1861, and has more than doubled since 1881, although there has been a great falling-off in the rate of increase since 1891. Prior to that year the annual increase was about 4 per cent., but up to 1904 it was under 2 per cent. Since 1904 the rate of increase has advanced, and is now higher than at any time since 1891. In 1861 the number of persons per square mile was 1·1, in 1891 it was 3·6, and in 1906 it was nearly 5.

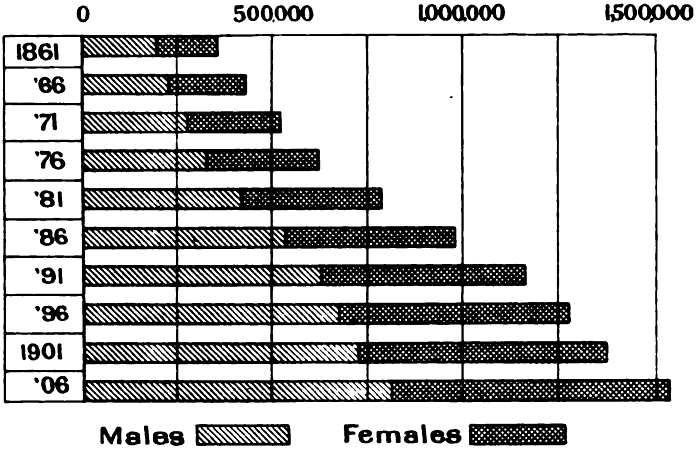
The growth of population depends upon two factors—the natural increase or excess of births over deaths, and the increase by excess of immigration over emigration. The next statement shows the increase due to each source from the census of 1861 to 1906 :—

Period.	Increase by excess of Births over Deaths.	Increase by excess of Immigration over Emigration.	Total Increase.
1861-71	106,077	47,044	153,121
1871-81	140,382	107,105	247,487
1881-91	211,301	169,465	380,766
1891-1901	226,676	223	226,899
1901-06	130,799	41,052	171,851

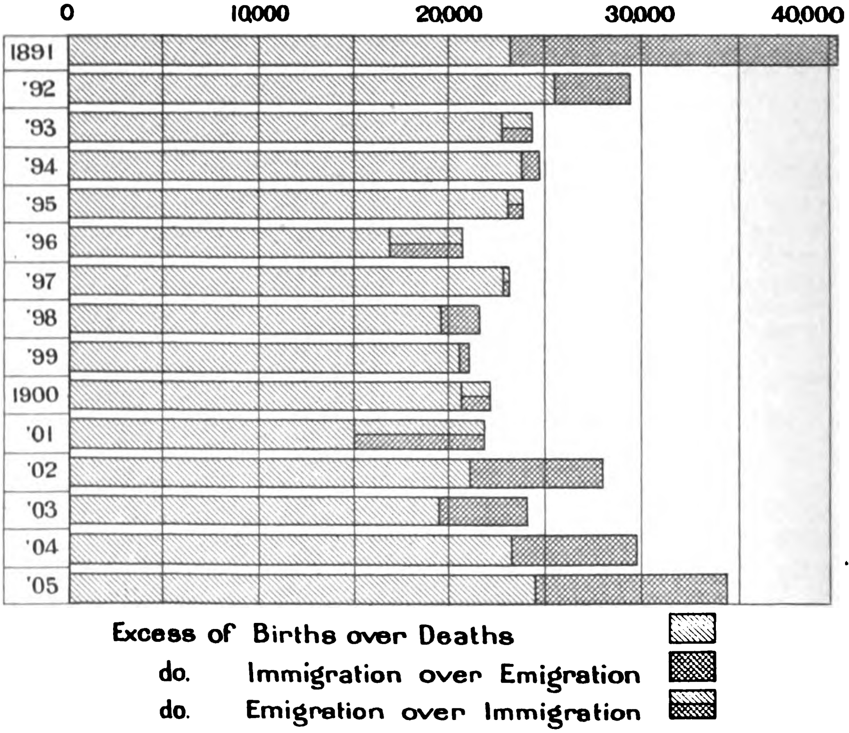
The increase by excess of immigration grew steadily larger during each inter-censal period up to 1891, but the decade 1891 to 1901 shows a very glaring contrast with the previous periods. The increase during the ten years was only 223 by excess of arrivals. There has, however, been a considerable improvement since 1901. The period 1861-1871, following the discovery of gold, saw the excitement abate somewhat and a demand for land created. The public lands were, therefore, thrown open for free selection before survey, and many persons were assisted to immigrate to the State. During the next period the stream of assisted immigration continued, and it was also during this period that the "vigorous policy of public works" was inaugurated. This continued throughout the next decade, and, consequently, many persons were attracted to the State by the ease with which employment could be obtained and the high rate of wages, notwithstanding that State-aided immigration practically ceased in 1886. Towards the end of this decade, expenditure, both State and private, was suddenly curtailed, and there was a consequent scarcity of employment and check to immigration. The year 1891 practically saw the end of immigration, and for twelve years after the population progressed only by reason of the natural increase. At the same time, it should be explained that the balance of migration was affected by other causes. One was the rush of men to Western Australia after the discovery of gold in 1894; another was the departure of over 5,000 troops to the war in South Africa, from 1899 to 1901. These latter have since returned, as well as many of those in the former category, as will be seen from the above statement, where the excess of immigration since 1901 is shown to be 41,052.

The population of New South Wales is primarily obtained at the census, which is taken every ten years. As, however, the population for the intervening years is required for many purposes, it becomes necessary to determine it as accurately as possible, and estimates are therefore made which depend upon the records of births and deaths, and of immigration and emigration. The machinery for the registration of births and deaths ensures a reliable return under those heads, and, as regards the migration returns, experience shows that, while the records of overland migration are by no means perfect, they give with fair accuracy the gain or loss to the State across its borders. In the case of the sea traffic, however, the returns are less reliable, as there are persons who go on board vessels after the passenger-list is made up, and whose departure is, therefore, not recorded. An allowance, based upon the experience of the inter-censal years, 1891 to 1901, is made on account of such unrecorded departures by sea, and it is believed amply covers the defect of the emigration returns. In 1901, at the census, the population estimated according to this method was nearly 14,000, or a little more than 1 per

POPULATION



ANNUAL INCREASE IN POPULATION



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cent., over the actual number. This figure would make no appreciable difference in calculating rates per head. In the United Kingdom, where migration is more or less steady, it is the practice to estimate the population at any time on the assumption that the annual rate of increase during the last inter-censal period has steadily continued. This method, however, would not be at all suitable for New South Wales, on account of the irregular movement of the population.

In order to show the variations in the annual growth of population, the following table is appended, giving the population of New South Wales, inclusive of aborigines, at the end of each of the last sixteen years. The increase due to each of the factors already mentioned is also given, as well as the annual increase per cent. :—

Year (31st December).	Population.	Annual Increase.			Increase per cent. per annum.
		By excess of Births over Deaths.	By excess of Immigration over Emigration.	Total.	
1891	1,162,190	23,172	17,158	40,330	3·50
1892	1,191,790	25,631	3,969	29,600	2·55
1893	1,214,550	24,320	— 1,560	22,760	1·91
1894	1,239,250	23,781	919	24,700	2·03
1895	1,262,270	23,860	— 840	23,020	1·86
1896	1,278,970	20,667	— 3,967	16,700	1·32
1897	1,301,780	22,983	— 173	22,810	1·78
1898	1,323,130	19,561	1,789	21,350	1·64
1899	1,344,080	20,560	390	20,950	1·58
1900	1,364,590	22,028	— 1,518	20,510	1·53
1901	1,379,527	21,854	— 6,917	14,937	1·09
1902	1,407,619	21,189	6,903	28,092	2·04
1903	1,431,611	19,469	4,523	23,992	1·70
1904	1,461,549	23,307	6,631	29,938	2·09
1905	1,496,007	24,523	9,935	34,458	2·36
1906	1,530,984	25,973	9,004	34,977	2·34

The — sign indicates a decrease on account of excess of departures over arrivals.

This table shows clearly the falling-off between 1891 and 1901; during six of the years the balance of migration was against the State. It is, however, satisfactory to note the change for the better since 1901, until in 1906 the total increase, 34,977 was the largest in any year since 1891. The excess of births and the relative increase were the largest since 1892. The excess of immigration was still, however, a long way behind the figure for 1891. The least satisfactory feature of the migration returns is that the gain was largely at the expense of the other Australian States and New Zealand. There is a very large movement of population each year, but it can hardly be described as immigration and emigration in the restricted sense in which those terms are used, and is largely due to the arrival and departure of tourists and business men. The main reasons put forward for the lack of immigration to Australia are the distance of the country from Europe, the time taken up on the voyage, and the cost of passage. Another reason is the comparative ignorance of European people with regard to the resources of the State. In 1905, however, matters were very radically changed. Systematic efforts have since been made in the United Kingdom to advertise the progress and resources of the State, and a sum of money set apart to assist immigrants. There has also been a revival of public interest in the matter, and already a great change is to be seen; 640 picked persons, of most desirable character, have been assisted to immigrate to the State by the Government, and generally the movement of population with the United Kingdom, which during the five years 1901-05 was against the State, turned during 1906 in favour of it.

The next table shows the arrivals in and departures from the State by sea and by land during the last sixteen years, proper allowance being made therein for those unrecorded:—

Year.	Arrivals.			Departures.		
	By Sea.	By Land.	Total.	By Sea.	By Land.	Total.
1891	69,919	77,270	147,189	56,775	73,256	130,031
1892	62,197	68,255	130,452	57,476	69,007	126,483
1893	66,909	49,693	116,602	64,034	54,128	118,162
1894	75,588	47,090	122,678	71,773	49,986	121,759
1895	76,051	58,075	134,126	72,128	62,838	134,966
1896	62,633	64,746	127,379	67,887	63,459	131,346
1897	67,016	71,349	138,365	65,611	72,927	138,538
1898	75,526	69,940	145,466	71,398	72,279	143,677
1899	77,634	71,983	149,617	71,563	77,664	149,227
1900	68,783	82,530	151,313	67,190	85,641	152,831
1901	76,139	87,474	163,613	69,500	101,030	170,530
1902	81,191	79,459	160,650	67,400	86,347	153,747
1903	70,570	81,773	152,343	63,632	84,188	147,820
1904	72,978	83,284	156,262	63,588	86,043	149,631
1905	74,170	98,134	172,304	63,682	98,687	162,369
1906	79,465	113,871	193,336	68,792	115,540	184,332

The following table shows the movement of population between New South Wales and various countries during the last five years. Over 80 per cent. of the movement is with the other Australian States, and more than one-half of the movement with countries outside Australia is with New Zealand:—

Countries.	1902.	1903.	1904.	1905.	1906.
ARRIVALS.					
Australian States	126,358	124,302	126,194	142,449	162,165
New Zealand	13,161	12,868	14,314	15,093	16,525
United Kingdom	4,864	4,249	4,842	4,859	5,641
Other British Possessions	6,080	2,313	3,172	3,490	3,825
Foreign Countries	10,187	8,611	7,740	6,413	5,180
Total	160,650	152,343	156,262	172,304	193,336
DEPARTURES.					
Australian States	122,795	119,103	121,931	135,457	154,999
New Zealand	12,803	13,204	12,782	12,310	15,452
United Kingdom	5,956	5,136	5,837	5,501	4,627
Other British Possessions	6,386	4,293	3,980	4,278	4,508
Foreign Countries	5,807	6,084	5,101	4,823	4,746
Total	153,747	147,820	149,631	162,369	184,332

The net gain from countries outside the Commonwealth during 1906 was 1,838. In 1904 the gain was 2,368, and in 1905 it was 2,943. Excluding New Zealand, the excess of arrivals from countries beyond Australia during 1906 was only 765. From the United Kingdom there was a gain of 1,014; from South Africa of 689, and from foreign countries of 1,360, while there was a loss of 729 to other British possessions, and of 490 to the United States.

The following statement gives the population for each of the States of the Commonwealth at the Census of 1901, and at the 31st December, 1906, inclusive of full-blooded aborigines. The population of Victoria does not agree with the figure published by the Statist of that State. It has, however, been estimated in accordance with the method adopted by the Statisticians of Australia in conference in 1903 and again in 1906. The proportion of population in each State is shown, and the rate of increase per annum since the Census of 1901:—

State.	Population 31st March, 1901.		Population 31st December, 1906.		Increase per cent. per annum from the Census 1901, to December, 1906.
	Number.	Per cent.	Number.	Per cent.	
New South Wales ...	1,359,133	35·93	1,530,984	37·08	2·09
Victoria	1,201,341	31·76	1,232,211	29·84	·44
Queensland	503,266	13·30	540,250	13·08	1·24
South Australia	362,604	9·58	383,829	9·30	·99
Western Australia ...	184,124	4·87	261,746	6·34	6·31
Tasmania	172,475	4·56	180,156	4·36	·76
Commonwealth...	3,782,943	100·00	4,129,176	100·00	1·53

The average natural increase is about 1½ per cent. per annum. It is, therefore, apparent that all the States, with the exception of New South Wales and Western Australia, have lost population since the Census, by reason of the departures exceeding the arrivals. The two States mentioned have gained from the others.

DISTRIBUTION OF SEXES.

On the 31st December, 1906, it is estimated that there were 816,590 males and 714,394 females in the State, the proportion of the sexes being, therefore, males 53·34 per cent., and females 46·66 per cent., or about 114 males to 100 females. At the Census of 1901, the males constituted 52·42 per cent. and the females 47·58 per cent. of the total. The distribution of the sexes has undergone little change for several years past, as will be seen from the following statement, which gives the proportion of males and females at each census from 1861 to 1901, and at the end of 1906:—

Year.	Proportion of Males.	Proportion of Females.	Males per 100 Females.
	per cent.	per cent.	No.
1861	56·57	43·43	130
1871	54·67	45·33	121
1881	54·86	45·14	121
1891	54·14	45·86	118
1901	52·42	47·58	110
1906	53·34	46·66	114

The excess of males over females is chiefly at ages above 30 years, and is due to the large immigration of males in former years. It will be observed, however, that in 1901 there was less difference between the proportion of the sexes than ever before, as there was very little immigration during the preceding ten years, and the natural increase of females, which is larger than that of males, had, therefore, its full effect. In 1906 the proportion of males was higher than in 1901, owing to increased immigration. When the population increases by excess of immigration the males increase more quickly than the females.

URBAN AND RURAL POPULATION.

To anyone unacquainted with the conditions of Australian progress, the figures relating to the distribution of population in New South Wales will, perhaps, appear somewhat remarkable. The population aggregated in the Metropolitan area is considerably larger than that in all the other towns of the State taken together, and is also greater than the whole of the rural population. At the Census of 1901, 35·8 per cent. of the inhabitants of New South Wales resided in the metropolis, 32·8 per cent. in the other urban districts, and 31·4 per cent. in the rural districts. The following statement shows the distribution of the population on the 31st March, 1901 :—

In the Metropolitan area	481,830
In Newcastle and Suburbs	53,741
In 11 towns with population of 5,000 and under 20,000...	98,889
In 42 ,, ,, 2,000 ,, 5,000...	125,683
In 62 ,, ,, 1,000 ,, 2,000...	91,359
In 106 ,, ,, 500 ,, 1,000...	72,771
Urban Population	924,273
Rural Population	422,447
Total	1,346,720
Shipping	8,026
Aborigines	4,287
Lord Howe Island	100
Total Population, New South Wales ...	1,359,133

During the ten years from 1891 to 1901, while the rural population increased by 34,101, the urban population increased by 194,369, and of this latter 98,547 belonged to the metropolitan district. It would therefore appear, that judging by ratio of increase, urban population is increasing three times as rapidly as the rural. Thirty years ago, out of every 1,000 persons living in New South Wales 532 were in the rural districts of the State, but the proportion is now only 314, and this peculiar result has been arrived at notwithstanding the fact that every possible inducement has been offered to persons to settle away from the towns. The following table shows the urban population and the rural population at each census from 1861 to 1901 :—

	1861.	1871.	1881.	1891.	1901.
Sydney and Suburbs	95,789	137,586	224,939	383,283	481,830
Other Towns	64,045	97,037	201,731	346,621	442,443
Total Urban	159,834	234,623	426,670	729,904	924,273
,, Rural	189,116	266,956	321,571	388,346	422,447
Total	348,950	501,579	748,241	1,118,250	1,346,720

It is to be understood that the total population shown here is exclusive of shipping and aborigines. These figures indicate that some time between 1871 and 1881 the urban population, which had up to that time been considerably below that of the rural districts, became equal to the population living in the country districts. The year when this event occurred was probably 1875. Thenceforward the urban population grew far more rapidly than the rural, so that in 1901 the astonishing condition of affairs was found to exist that the urban population exceeded the rural by about 120 per cent. The progress of population will be best seen from the following table, which gives the proportion per cent. of the urban and rural population to the whole population of the State :—

	1861.	1871.	1881.	1891.	1901.
Sydney and Suburbs	27·45	27·43	30·06	34·27	35·78
Other Towns	18·35	19·35	27·00	31·00	32·85
Total Urban	45·80	46·78	57·06	65·27	68·63
,, Rural	54·20	53·22	42·94	34·73	31·37

The relation of these two sets of figures will, perhaps, be more clearly understood by a presentation of the annual increase per cent. during each decade, of urban and rural population :—

	1861-71	1871-81	1881-91	1891-1901
Urban	3·92	6·16	5·52	2·39
Rural	3·50	1·88	1·90	0·85

As the normal rate of increase due to the excess of births over deaths during the period 1871 to 1881 was 2·32 per cent., from 1881 to 1891, 2·23 per cent., and from 1891 to 1901, 1·80 per cent., the figures last given show clearly that the rural districts of the State are not retaining, and have not retained for several years past, their natural increase of population, and that the towns have attracted not only immigrants to the State, but also some portion of the rural population. Various causes have been at work to bring about this state of affairs. In England, France, and Germany the abnormal growth of the urban population during the last thirty or forty years has been largely due to the increase in the manufacturing industries, which have been almost necessarily established in or near towns, and which have changed the occupations of the people, and have consequently attracted from the country young people in search of employment. Even in the United States, the most favoured country for the agricultural labourer, the same state of things is seen. But in America the rise of the great cities has been accompanied by an increase in the rural population.

In Australia, however, influences of a different kind are at work, and the growth of the metropolitan centres has been marked by features of more than ordinary interest. There can be no difficulty in understanding the growth of cities such as London, which are large trading centres. But Sydney, which contains 36 per cent. of the population of New South Wales, and whose commerce is the most valuable of the ports of Australia, can claim little trade which is not due to the productiveness of its own territory. There has been no abnormal increase of factories, yet, as previously explained, the rural growth has been slower than the metropolitan.

The rapid growth of Sydney has been due mainly to the physical configuration of New South Wales. The geographical characteristics have made no other mode of development possible. The coastal rivers are all short, none of them stretching into the interior, so that communication with the outer world has begun and ended with a good roadstead for shipping. The State had its beginning on the site whereon has grown the city, which, being also the chief port, was of necessity the only channel through which immigrants from foreign lands could pass to the interior. Immigrants to Australia linger long in their port of debarkation, and experience shows that they seldom care to leave it while employment is procurable.

In this connection the following table is of interest, as it shows where the persons of different nationalities in the State have settled, whether in the towns or in the country. The figures represent the approximate proportion per cent. of the total population residing in the urban and rural districts at the census of 1901 :—

Nationality.	Metropolis.	Other Incorporated Towns.	Rural.
Australian born................	33·40	27·74	38·86
British born	47·21	26·23	26·56
Foreign born	44·43	24·85	30·72
Whole population	35·78	27·64	36·58

There is an apparent discrepancy between the proportions in the last table and in that on the preceding page. This is owing to the fact that in the last table only incorporated towns are included as "urban," whereas in the first table all towns with a population of 500 and over are included.

It will be seen that nearly half the British and foreign-born residents in the State are situated in the metropolis, and in the urban districts collectively, about three in every four. Only one-third of the Australian-born dwell in the metropolis; but it should be remembered that 90 per cent. of the British and foreign-born are adults, as against 40 per cent. of the Australian-born.

The more or less backward state of rural development in New South Wales is to be accounted for by the large share of attention which the pastoral industry has received. Wool-growing has been for many years the staple industry. The actual tending of the flocks needs few hands, and those widely scattered, while the handling of bales of wool at a convenient place of shipment demands all the resources of a great commercial centre. A consideration of the circumstances governing settlement thus makes it clear that, while areas of splendid country devoted to primary production are in the hands of a comparatively small population, the production from primary sources has been so valuable that it has been possible to support relatively large agglomerations of people in the centres of secondary production and distribution.

THE METROPOLIS.

The district conventionally termed the Metropolis comprises Sydney and the forty municipalities which surround it, as well as the islands of Port Jackson, and embraces an area of a little over 142 square miles. The area included may be described roughly as a square bounded on the east by the sea coast, and on the south by the waters of Botany Bay and George's River. On the other sides it is enclosed by the western boundaries of Hurstville, Canterbury, Enfield, Strathfield, Concord, and Ryde, and by the northern boundaries of Ryde, Marsfield, Willoughby, and Manly. The habitations within these limits are fairly continuous, with the exception of parts of Ryde and Canterbury. The following statement shows, at the census of 1901, and on the 31st December, 1906, the population of each municipality comprised in the metropolis:—

Municipality.	Population 31st Mar., 1901.	Population 31st Dec., 1906.	Municipality.	Population 31st Mar., 1901.	Population 31st Dec., 1906.
City of Sydney	118,207	118,400	Manly	5,035	5,210
Alexandria	9,341	10,310	Marrickville	18,775	21,870
Annandale	8,349	10,060	Marsfield	713	760
Ashfield	14,329	15,080	Mosman	5,691	8.520
Balmain	30,076	32,330	Newtown	22,598	26,380
Bexley	3,079	3,720	North Sydney	22,040	25,050
Botany	3,383	4,410	Paddington	21,984	23,680
Botany, North	3,772	4,790	Petersham	15,307	17,760
Burwood	7,521	8,080	Randwick	9,753	10,210
Camperdown	7,931	9,090	Redfern	24,219	26,160
Canterbury	4,226	5,170	Rockdale	7,857	9,460
Concord	2,818	2,840	Ryde	3,222	3,510
Darlington	3,784	3,940	St. Peter's	5,906	7,770
Drummoyne	4,244	5,110	Strathfield	2,991	3,210
Enfield	2,497	2,610	Vaucluse	1,152	1,410
Erskineville	6,059	7,060	Waterloo	9,609	11,690
Glebe	19,220	20,520	Waverley	12,342	14,780
Hunter's Hill	4,232	4,400	Willoughby	6,004	7,400
Hurstville	4,019	4,190	Woollahra	12,351	14,320
Kogarah	3,892	4,460			
Lane Cove	1,918	2,050	Total	487,900	538,800
Leichhardt	17,454	21,090			

The population of the metropolis is rather unevenly distributed. One-half of the inhabitants are crowded into a little over 6,000 acres, having a density per acre of 25 to 100, while one-third occupy about 18,000 acres with an average density of 9, and the remainder are scattered over about 67,000 acres, and have a density of a little over 1 per acre.

COUNTRY DISTRICTS.

Outside the metropolitan districts settlement at first tended to follow the main roads, but with the establishment of the railway, the population settled within reach of the railway lines. In other parts of the country, however, especially in the coastal area, where the bulk of the people dwell, the development of the towns has more than kept pace with the general population. Thus, in the Valley of the Hunter, with its large agricultural and mining industries, population has made rapid strides. Newcastle and suburbs, for instance, increased from 7,810 in 1861 to 54,991 in 1901, and 61,400 in 1906. The Illawarra district, rich in coal and pasture, and the maize and sugar-growing districts of the Clarence and Richmond Rivers have also increased largely. The next statement shows, at the census of 1901, and at the 31st December, 1905, the populations of the principal country municipalities of New South Wales:—

Municipality.	Population.		Municipality.	Population.	
	Census, 1901.	31st Dec., 1906.		Census, 1901.	31st Dec., 1906.
Albury	5,821	6,780	Lismore	4,378	5,680
Armidale	4,249	4,400	Lithgow	5,268	6,380
Bathurst	9,223	9,400	Liverpool	3,901	4,250
Bourke	2,609	2,000	Maitland, East and West	10,078	11,020
Broken Hill	27,500	29,000	Mudgee	2,789	3,390
Cobar	3,371	3,800	Narrabri and West Narrabri	2,963	3,170
Cootamundra	2,424	2,790	Newcastle and Suburbs	54,991	61,400
Deniliquin	2,644	2,870	Orange and East Orange	6,331	6,970
Dubbo	3,409	3,320	Parkes	3,181	3,260
Forbes	4,294	4,960	Parramatta	12,500	13,000
Glen Innes	2,918	3,670	Penrith	3,539	3,750
Goulburn	10,612	10,890	Tamworth	5,799	6,300
Grafton and South Grafton	5,147	5,860	Tenterfield	2,604	3,120
Granville	5,094	6,440	Wagga Wagga	5,108	5,690
Hay	3,012	3,120	Wellington	2,984	3,500
Inverell	3,293	4,600	Yass	2,220	2,500
Kempsey	2,329	2,910	Young	2,755	2,840

None of these municipalities is densely populated, the most closely inhabited only averaging a little over 6 persons per acre. The largest is Bourke, with an area of over 28,000 acres, and the smallest Dubbo, with 659 acres.

AGES OF THE PEOPLE.

The Census of 1901 furnished full particulars with regard to the ages of the people of New South Wales at that date. The table given below shows the number of persons, male and female, at each quinquennial period of age up to 85. The males in their 21st year numbered 12,754, and the females, 13,457. Aboriginal natives are not included:—

Ages.	Population.			Proportion per cent.		
	Males.	Females.	Total.	Males.	Females.	Total.
Under 5 years	80,308	78,553	158,861	11·31	12·18	11·73
5—9	84,189	81,946	166,135	11·86	12·71	12·26
10—14	81,582	80,097	161,679	11·49	12·42	11·93
15—19	70,423	70,736	141,159	9·94	10·97	10·43
20—24	62,448	64,818	127,266	8·89	10·07	9·45
25—29	56,273	56,043	112,316	8·01	8·70	8·34
30—34	52,596	46,697	99,293	7·45	7·25	7·36
35—39	52,335	41,593	93,928	7·41	6·46	6·96
40—44	44,930	33,436	78,366	6·35	5·19	5·80
45—49	33,338	24,001	57,339	4·71	3·73	4·24
50—54	25,615	19,327	44,942	3·62	3·00	3·33
55—59	19,634	15,376	35,010	2·77	2·39	2·59
60—64	16,733	12,192	28,925	2·36	1·89	2·14
65—69	13,005	9,237	22,242	1·84	1·44	1·65
70—74	7,772	5,202	12,974	1·10	·80	·96
75—79	3,578	2,844	6,422	·51	·44	·47
80—84	1,883	1,574	3,457	·27	·25	·25
85 and over	800	678	1,478	·11	·11	·11
Unspecified { Children	277	44	321	......	......	......
Unspecified { Adults	2,286	447	2,733	......	......	......
All Ages	710,005	644,841	1,354,846	100·00	100·00	100·00

At ages under 30 there is very little difference in number between the males and females—in fact, between ages 15 and 25 the females are the greater. At ages over 30 the males are very much in excess of the females. If a comparison be made with the results of the previous census, it will be found that the age constitution of the people has materially altered since 1891. The Census of that year showed a steady fall in the population, both of males and females, from infancy to old age, the only exceptions being that the males showed increases in the periods from 20 to 25 years and from 25 to 30 years. The results of the Census of 1901 show that the largest number at any age period is found from 5 to 10 years, while the number in the first age group—under 5 years—is also exceeded by the total between 10 and 15 years. Not only has the proportion of the children under 5 decreased since 1891, but the actual number has decreased by 6,112.

The following statement shows the population distributed in certain conventional groups, and, in order to account for the whole population, the unspecified have been apportioned among the specified :—

Group.	Number.			Proportion per cent.		
	Males.	Females.	Total.	Males.	Females.	Total.
Infants—under 5	80.318	78,564	158,882	11·31	12·19	11·73
School age—5-14	165,791	162,064	327,855	23·35	25·13	24·20
Supporting ages—15-64	436,781	384,650	821,431	61·52	59·65	60·63
Old age—65 and over	27,115	19,563	46,678	3·82	3·03	3·44
Total	710,005	644,841	1,354,846	100·00	100·00	100·00
Adults—21 and over	380,472	320,008	700,480	53·59	49·63	51·70
Military age—20 to 39	225,485	....	....	31·76	.....	......
Reproductive age—15 to 44	....	313,655	....	......	48·64	......

The statutory school ages comprise eight years, namely, from 6 to 14. At this life-period there were 133,238 boys and 130,597 girls, the total being 263,835, or 19·47 per cent. of the whole population.

BIRTHPLACES OF THE PEOPLE.

The population of New South Wales is probably more homogeneous than that of any other country, the bulk of the people being of direct British origin. At the census of 1901 no less than 96½ per cent. were born in Australia and the United Kingdom, 1 per cent. were born in British possessions and foreign countries, but were mainly of British extraction, and only 2½ per cent. were foreign born. Of course, some of the native born are of foreign extraction, but the number is small.

At the census of 1901 the birthplaces of 1,353,408 persons were ascertained, the remaining 1,438 neglecting to state their country of birth. The following statement shows the number and proportion of each sex born in various countries. The figures are exclusive of aborigines :—

Birthplace.	Number.			Proportion per cent.		
	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	487,039	490,137	977,176	68·67	76·07	72·20
Other Australian States and New Zealand	59,272	53,295	112,567	8·36	8·27	8·32
England and Wales	78,441	51,298	129,739	11·06	7·96	9·58
Scotland	18,566	12,151	30,717	2·62	1·89	2·27
Ireland	30,463	29,482	59,945	4·30	4·58	4·43
Other British Possessions	4,518	1,435	5,953	·64	·22	·44
Total, British Empire	678,299	637,798	1,316,097	95·65	98·99	97·24
German Empire	6,390	2,326	8,716	·90	·36	·64
Other European Countries	10,437	2,120	12,557	1·48	·33	·93
United States of America and Possessions	2,205	925	3,130	·31	·14	·23
Chinese Empire	9,890	103	9,993	1·39	·02	·74
Other Foreign Countries	775	173	948	·11	·03	·07
Total, Foreign Countries	29,697	5,647	35,344	4·19	·88	2·61
At Sea	1,100	867	1,967	·16	·13	·15
Not stated	909	529	1,438	......	......	......
All Countries	710,005	644,841	1,354,846	100·00	100·00	100·00

The natives of the British Empire resident in New South Wales, including of course the Australian born, numbered 1,316,097, or 97·24 per cent. of the whole population. The foreign born numbered 35,344, or 2·61 per cent. of the total. Of these, Europeans were the most numerous, comprising 21,273, or 60·2 per cent., Asiatics came next with 10,261, or 29·0 per cent., followed by Americans with 3,330, or 9·4 per cent., and Africans with 93, or ·3 per cent. The foreign countries which contributed the highest numbers to the population were the Chinese Empire,. with 9,993; German Empire, 8,716; Sweden and Norway, 3,190; and the United States of America, 3,130.

The foreign born population are almost entirely adults, only 4 per cent. of the males and 11 per cent. of the females being under 21. The British born inhabitants are also largely composed of adults. The natives of New South Wales are most numerous at the younger ages, only 37·5 per cent. of the males and 38·6 per cent. of the females being over 21. Of the natives of the other Australian States a little more than two-thirds are adults.

The following statement shows the proportion per cent. of the population born in various countries at each census from 1861 to 1901:—

Birthplaces.	1861.	1871.	1881.	1891.	1901.
New South Wales	45·80	58·55	62·16	64·58	72·20
Other Australian States and New Zealand	1·34	2·68	5·94	7·56	8·32
England and Wales	24·43	17·75	14·77	13·74	9·58
Scotland	5·21	3·99	3·35	3·28	2·27
Ireland	15·67	12·53	9·24	6·68	4·43
Other British Possessions	·99	·39	·50	·44	·44
Total, British Empire	93·44	95·89	95·96	96·28	97·24
German Empire	1·57	1·32	1·01	·85	·64
Other European Countries	·20	·18	·88	1·11	·93
Chinese Empire	3·71	1·43	1·36	1·17	·74
Other Foreign Countries	1·08	·90	·56	·41	·30
Total, Foreign Countries	6·56	3·83	3·81	3·54	2·61
At Sea	......*	·28	·23	·18	·15
All Countries	100·00	100·00	100·00	100·00	100·00

* Not ascertained; included with "Other Foreign Countries."

It will be seen that the proportion of the Australian born has been steadily increasing, and the proportion of the foreign born steadily diminishing ever since 1861. The countries of the United Kingdom all show large decreases.

At the date of the last enumeration there were living in the other five States and New Zealand 74,089 natives of New South Wales, and in New South Wales there were living 112,099 natives of the other States, so that the net gain to New South Wales of immigrants from other parts of Australasia was 38,010 persons. The distribution in each State was as follows:—

State.	Natives of each State living in New South Wales.	Natives of New South Wales living in each State.	Gain to New South Wales.	Loss to New South Wales.
Victoria	56,019	22,404	33,615	......
South Australia	22,059	4,128	17,931	......
Queensland	14,968	24,868	......	9,900
New Zealand	10,589	6,492	4,097	......
Tasmania	7,577	2,075	5,502	......
Western Australia	887	14,122	......	13,235
Total	112,099	74,089	61,145	23,135

As the table shows, New South Wales gained from Victoria, South Australia, Tasmania, and New Zealand, but lost to Queensland and Western Australia.

COLOURED ALIEN RACES.

The influx of Hindoos and other Eastern races had long caused a feeling of uneasiness, and restrictive legislation was already in force prior to federation. One of the first measures pased by the Federal Parliament was the Immigration Restriction Act, which provided for the exclusion of any person who, when asked to do so, failed to write out and sign a passage of fifty words in a European language specified by an officer of the Customs. Other undesirable persons enumerated in the Act are prohibited from entering the Commonwealth. Under the Immigration Restriction Amendment Act of 1905, however, the dictation test was altered by the substitution of any prescribed language for a European language, as in the principal Act.

During 1902 admission was refused to 653 persons, in 1903 to 152 persons, in 1904 to 117, and in 1905 to 106, of whom about 93 per cent. failed to pass the education test. The Act does not apply to persons in possession of certificates of exemption, to His Majesty's land and sea forces, to the master and crew of any public vessel of any Government, to any person duly accredited by any Government, or to any person who satisfies an officer of the Customs that he has been formerly domiciled in the Commonwealth.

The further immigration of Pacific Islanders to Australia is now prohibited by the Pacific Islands Labourers Act. This Act was particularly directed against the continued employment of these aliens on the sugar plantations, and under its provisions all agreements for their employment terminated on the 31st December, 1906. Arrangements were made by the Commonwealth Government for the deportation of the Islanders to their respective homes during 1907.

At the census of 1901 the number of coloured persons in New South Wales was 14,833, the country of birth being as follows. Aboriginal natives of Australia are not included :—

Birthplace.	Males.	Females.	Total.
Asiatics—			
Chinese	10,063	159	10,222
Chinese half-castes	527	514	1,041
India	1,576	16	1,592
Ceylon	87	2	89
Japan	152	9	161
Syria	454	268	722
Afghanistan	55	......	55
Goa	38	......	38
Other Asiatics	55	5	60
Total Asiatics	13,007	973	13,980
Africans—			
Egypt	13	6	19
Mauritius and the Seychelles	167	89	256
Algeria (Arabs)	89	......	89
Other Africans	16	6	22
Total Africans	285	101	386
Polynesians and Melanesians—			
New Caledonia	43	3	46
New Hebrides	46	2	48
Fiji	21	4	25
South Sea Islands (not otherwise described)	265	10	275
Solomon Islands	37	......	37
Sandwich Islands	14	......	14
Other Polynesians	20	2	22
Total Polynesians and Melanesians	446	21	467
Grand Total	13,738	1,095	14,833

Chinese.—The most numerous of these races was the Chinese, who constituted also the most important foreign element in the whole population. They were first attracted to the State by the gold discoveries. In 1901 they numbered 11,263, comprising 10,222 full bloods and 1,041 half-castes, and were nearly all males. The number of Chinese in the State at the date of each census from 1861 to 1901 was as follows:—

Census.	Males.	Females.	Total.	Proportion per cent. of total population.
1861	12,986	2	12,988	3·70
1871	7,208	12	7,220	1·43
1881	10,141	64	10,205	1·36
1891	13,555	601	14,156	1·26
1901	10,590	673	11,263	·83

Prior to 1891 the half-castes were not enumerated. It will be seen that there has been a gradual decrease since 1871 in the proportion of Chinese. From 1861 to 1871 the decline was probably due to the diminished gold yield and the discovery of richer fields in the neighbouring States. From 1891 to 1901 the results of the Chinese Restriction Act, which was passed in 1888, are evident. In 1887, the year before the passing of the Act, the number of Chinese arriving in New South Wales was 4,436, in 1888 the arrivals were 1,848, but since that year the highest number was 176 in 1904. Acts to restrict the immigration of Chinese had also been passed in 1867 and 1881.

Only about 10 per cent. of the Chinese are under 21 years of age, those who are so young having been born in New South Wales. The number in the principal age groups was as follows. The proportions borne by the males in each group to the total males in that group are also shown :—

Age Group.	Males.	Females.	Total.	Proportion per cent. of Males to total Males in each Group.
Under 5	127	129	256	0·16
5—14	266	246	512	0·16
15—20	158	106	264	0·19
21—44	5,842	182	6,024	2·28
45—64	3,308	10	3,318	3·47
65 and over	766	...	766	2·83
Not stated—Adults	123	...	123	......
Total	10,590	673	11,263	1·49

The group on which the males have most influence is thus from 45 to 64. The old-age group, 65 and over, contains nearly 3 per cent. of Chinese.

The Chinese are scattered throughout the State, but are principally to be found in the metropolis, which contained 3,842, or about one-third of the total, while the balance of the metropolitan county, Cumberland, contained 555. In Newcastle the number was 322. Their occupations are many and various, the principal of them being shown in the statement below. They are market-gardeners, cooks, domestic servants, cabinetmakers, scrub-cutters, and mineral fossickers. They hawk fancy goods and vegetables. They even invade the callings of women, and are to be found as laundry workers. Inveterate gamblers, wherever they go, they introduce their lotteries and games of chance, although only ten were candid enough to return themselves at the census as connected with such. As grocers and storekeepers they are to be found everywhere, and their competition in this direction is much feared.

The following statement shows the principal occupations of the males :—

Occupation.	Males.	Occupation.	Males.
Market-gardeners	3,563	Ship Servants	151
Miners	1,019	Grocers	128
Scrub-cutters, &c.	785	Merchants and Dealers	122
Cabinet and Furniture Makers	662	Produce Merchants	106
Cooks	546	Domestic Servants	90
Storekeepers	493	General Labourers	90
Greengrocers	371	Laundry Workers	68
Farmers	294	Others	494
Fruit Dealers	279	Indefinite and Unspecified	64
Station employees	239	Dependents	581
Hotel and Restaurant Servants	231		
Hawkers	214	Total	10,590

Japanese.—The Japanese may be considered next, although they are a very small part of the population, numbering only 152 males and 9 females. They were nearly all situated in Sydney and Newcastle, and were engaged as ship and house servants.

Indians and Cingalese.—The coloured natives of India and Ceylon numbered 1,681, and were almost entirely males, there being only 18 females. The number was swollen by the presence of 173 soldiers who had come from India to take part in the Commonwealth celebrations in January, 1901. The persons of these countries are to be found chiefly in the metropolis, where there were 705. In the farming and sugar-growing counties of Clarence and Rous there were 148 and 269 respectively. They are principally adults, the great majority being between the ages of 35 and 45. The Indians and Cingalese were principally hawkers, farm labourers, and lascars.

Syrians.—Of all the coloured races the Syrians show the greatest equality of sexes, there being 454 males and 268 females, and, unlike the others, they do not congregate so much in the city. About 50 per cent. of them are hawkers, who travel all over the State; the greater part of the remainder are storekeepers and drapers in the country.

ABORIGINES.

The aborigines of Australia form a distinct race, and it may be presumed that the whole of them throughout the continent sprang from the same stock, although it is remarkable that their languages differ so greatly that tribes within short distances are often quite unable to understand each other, and in fact almost every large community of natives has its own peculiar dialect. It is difficult to form a correct estimate of the numbers of the aborigines; but while there is reason to believe that some generations ago they were very numerous, there is ample evidence of late years that in many places they are decreasing.

It is recorded that Governor Phillip estimated the aboriginal population, about the year 1800, at one million; the number between Broken Bay and Botany Bay appearing to have been about 3,000. It is impossible to say how far this estimate was in accordance with fact; for although at the time it did not probably seem an exaggerated conjecture in the face of so large a number as 3,000 having been found within the small area between the bays above mentioned, yet considering how small a portion of the territory was then explored by the early settlers, the statement must be accepted as what it professes to be, namely, an estimate at a time when the data to hand were very limited.

The aborigines were never properly enumerated until the census of 1891, when they were separated into full bloods and half-castes. In 1901 only full bloods and nomadic half-castes were counted. According to the Commonwealth Constitution Act, in reckoning the quota to determine the number of members to which each State is entitled in the House of Representatives, aboriginal natives of Australia are not to be counted. In reference thereto, the Federal Attorney-General decided that only full-bloods were aborigines within the meaning of the Act, and, consequently, half-castes in 1901 were included in the general population. In 1861 aborigines were not enumerated at all; in 1871 and 1881 the wandering tribes were passed over, and only those who were civilised or in contact with Europeans were enumerated and included in the general population. The numbers included in the population at each census were :—

Census.	Males.	Females.	Total.
1871	709	274	983
1881	938	705	1,643
1891	4,559	3,721	8,280
1901	2,451	1,836	4,287

In 1891 the number of half-castes was 1,663 males and 1,520 females, or 3,183 total persons. In 1901 the number of both full-bloods and half-castes was 4,093 males, 3,341 females, 7,434 total persons. The number of nomadic half-castes was 509, comprising 259 males and 250 females.

The following statement shows the total number of aborigines and half-castes in New South Wales at the date of each census since 1861, the numbers for the three first periods being estimates :—

Year.	Number of Aborigines.
1861	15,000
1871	12,000
1881	10,000
1891	8,280
1901	7,434

The aboriginal race is fast disappearing before the march of settlement, the annual rate of decrease being about 1 per cent. At the census of 1891 only 5,097 were of pure blood, and this number, in 1901, had fallen to 3,778. The half-castes slightly increased. It is possible that some of the aborigines, especially those least civilised, escape being enumerated.

The number of aborigines under the control of the Aborigines Protection Board at the end of the year 1905 was 7,133, of whom 2,656 were full-bloods and 4,477 half-castes. This shows a decrease on the return for the end of 1904 of 74 full-bloods and an increase of 297 half-castes. The number of births reported during 1905 was 249 (184 of the children being half-castes), and the number of deaths, 153 (64 half-castes). There are seven mission stations. These establishments, when first formed, were little more than camping grounds for the aborigines, where the blacks worked for their rations, and elementary instruction was imparted to the children; but now they have developed into settlements, with greatly improved huts for married couples, and adequate accommodation for teaching, duly qualified instructors having been appointed by the Department of Public Instruction. During 1905 there were on an average 886 full-blood aborigines and half-castes living at the mission stations, and during the same period 683 aboriginal children were receiving instruction in schools or privately. During the year a sum of £17,197 was expended on the aborigines. There are altogether in the State 150 reserves for the aborigines, the total area being 26,015 acres.

NATURALISATION.

Up to the 31st December, 1903, certificates of naturalisation were granted to aliens in accordance with the Naturalisation and Denization Act of 1898, but with the passing of the Commonwealth Naturalisation Act this power was taken away from the State, and vested exclusively in the Commonwealth Government. The Act came into operation on the 1st January, 1904. No letters or certificates of naturalisation granted in any State after the coming into operation of the Federal law are to have any effect.

Under the Commonwealth Act, any person who had, before the passing of the Act, obtained a certificate of naturalisation in any State is deemed to be naturalised. Any person resident in the Commonwealth, not being a British subject, and not being an aboriginal native of Asia, Africa, or the islands of the Pacific, excepting New Zealand, who intends to settle in the Commonwealth, and who has resided in Australia continuously for two years immediately preceding the application, or who has obtained in the United Kingdom a certificate of naturalisation, may apply to be naturalised.

An applicant under the first heading must produce, in support of his application, his own statutory declaration exhibiting his name, age, birth-place, occupation, residence, the length of his residence in Australia, and stating that he intends to settle in the Commonwealth, as well as a certificate signed by some competent person that the applicant is known to him and is of good repute. An applicant under the second heading must produce, in support of his application, his certificate of naturalisation and his own statutory declaration that he is the person named in the certificate, that he obtained it without fraud, that the signature thereto is genuine, and that he intends to settle in the Commonwealth.

The Governor-General, if satisfied with the evidence adduced, may in his discretion grant or withhold a certificate as he thinks most conducive to the public good, provided that he shall not issue the certificate until the applicant has taken the necessary oath of allegiance.

Any person to whom a certificate of naturalisation is granted shall be entitled to all political and other rights, powers and privileges, and be subject to all the obligations of a natural-born British subject, provided that where, by the provisions of any State Act, a distinction is made between the rights of natural-born British subjects and those naturalised in the State, the rights conferred by the Commonwealth Act shall be only those to which persons naturalised by the State Act are entitled. Under the previously existing Act in New South Wales, aliens may hold and acquire both real and personal property, but may not qualify for any office, nor have any rights or privileges except such as are expressly conferred upon them.

Any alien woman who marries a British subject shall be deemed to be thereby naturalised. Any infant, not being a natural-born British subject, whose father has become naturalised, or whose mother is married to a natural-born British subject or to a naturalised person, and who has at any time resided in Australia with such father or mother, shall be deemed to be naturalised.

On the whole, the conditions to be fulfilled under the Commonwealth Act do not differ greatly from those under the old State Act, but the term of residence necessary is now two years, whereas formerly it was five years. Under the Commonwealth Act, Asiatics, Africans, and Pacific Islanders are refused the rights of naturalisation; previously only the Chinese were so treated.

At the census of 1901 the number of naturalised foreigners was 3,619, comprising 3,265 males and 354 females. It is probable, however, that these numbers are under-stated. Germans have availed themselves most largely of the privileges of naturalisation, having taken out about one-half of the certificates granted.

The following table shows the nationalities of the persons naturalised during each of the last five years, and up to the end of 1905:—

Nationality.	1901.	1902.	1903.	1904.	1905.	Total to end of 1905.
German	153	108	109	412	170	4,618
Scandinavian	163	110	89	433	113	2,052
Russian	36	37	30	148	11	555
Italian	39	31	34	116	58	498
Other European	71	53	66	239	156	1,430
United States	10	6	3	26	10	170
China	...	...	...	...	...	908
Others	35	41	69	5	26	504
Total	507	386	400	1,379	544	10,735

There was a large increase in the number naturalised during 1904, the first year under the Commonwealth Act, by which the conditions were made somewhat easier; but in 1905 the number was largely reduced.

The principal occupations followed by the persons who were naturalised during 1905 were as follows:—Carpenter, 11; cook, 21; farmer, 26; fireman, 10; fish dealer, 21; fruiterer, 15; labourer, 82; mariner, 57; miner, 53; storekeeper, 13.

VITAL STATISTICS.

CONJUGAL CONDITION.

IN most countries the proportion of married to the total population is somewhat in excess of one-third. In New South Wales the proportion is slightly lower, as will be seen from the following statement, giving the number and proportion of each sex of each condition at the Census of 1901:—

Conjugal Condition.	Number.			Proportion per cent.		
	Males.	Females.	Total.	Males.	Females.	Total.
Never married	484,250	402,326	886,576	68·49	62·43	65·61
Married	202,922	206,186	409,108	28·67	32·00	30·25
Widowed	19,451	35,207	54,658	2·75	5·46	4·04
Divorced	692	708	1,400	·09	·11	·10
Not stated......................	2,690	414	3,104	......	......	......
Total	710,005	644,841	1,354,846	100·00	100·00	100·00

There are more married women than married men in the State owing probably to the absence of the husbands, and to the fact that a few women return themselves as married who are not really so. The large excess of widows over widowers is owing to the greater mortality among men, and to widowers re-marrying more often than widows. The proportion of never married is greater for males than for females.

The proportions per cent. of the never married, married, and widowed at each census from 1861 to 1901, were as shown below. The divorced are not shown on account of the smallness of the numbers, and because they were not enumerated prior to 1891:—

Census.	Males.			Females.		
	Never Married.	Married.	Widowed.	Never Married.	Married.	Widowed.
1861	69·34	28·23	2·43	61·09	35·14	3·77
1871	69·96	27·59	2·45	62·89	32·82	4·29
1881	70·64	26·93	2·43	63·52	31·75	4·73
1891	69·78	27·41	2·78	62·87	32·11	5·00
1901	68·49	28·67	2·75	62·43	32·00	5·46

The proportion of the never married of each sex increased at each census up to 1881, but decreased from 1881 to 1901. The married, as might be expected, showed a contrary tendency, for they decreased from 1861 to 1881; and while the males increased from 1881 to 1901, the females remained practically constant.

The average age of married people, as recorded at the census, was 43·44 years for husbands, and 39·05 years for wives, a difference of 4·39 years in favour of husbands. In 1891 the ages were respectively 41·43 and 36·96 years. The greatest number of married males at the time of the census was 34,469 at the age period 35 and under 40, whilst the greatest number of married females was 34,574 at the period 30 to 35. The following statement shows the relative ages of the husbands and wives who were together on the night of the census 1901. It appears that the number of such was 175,807. There were in addition 30,379 wives whose husbands were absent on the night of the census, and 27,115 husbands in similar circumstances as regards their wives. If these latter numbers are added to the number who were together the totals will represent the full number of married men and women in the State:—

Ages of Husbands.	Ages of Wives.													Total Husbands.
	Under 20	20–24	25–29	30–34	35–39	40–44	45–49	50–54	55–59	60–64	65–69	70 and over.	Not stated	
Under 20	61	30	1	..	..	..	..	..	..	..	..	..	..	92
20–24	1,108	3,995	828	96	20	7	..	..	..	..	..	..	8	6,062
25–29	727	7,518	8,725	1,535	241	34	8	2	..	..	..	..	2	18,792
30–34	230	3,562	10,916	9,670	1,721	280	59	13	4	1	..	..	13	26,472
35–39	72	1,239	5,411	11,534	10,136	1,843	292	62	8	1	..	..	15	30,613
40–44	17	406	1,733	5,076	10,204	8,135	1,429	243	53	8	3	..	14	27,321
45–49	8	114	501	1,444	4,175	7,215	5,444	1,013	200	47	12	6	16	20,195
50–54	4	87	162	462	1,319	3,187	4,724	3,892	688	166	42	11	7	14,701
55–59	..	7	52	171	473	1,265	2,314	3,621	2,864	558	118	22	7	11,472
60–64	1	8	30	89	211	504	877	1,687	2,582	1,968	409	107	4	8,477
65–69	1	7	8	30	88	184	352	667	1,347	1,740	1,432	314	1	6,171
70 and over	..	2	12	15	51	92	131	314	559	981	1,460	1,715	3	5,835
Not stated......	1	7	11	8	12	5	5	1	2	..	..	..	62	114
Total Wives ..	2,230	16,032	28,385	30,130	28,654	22,751	15,635	11,515	8,307	5,470	3,476	2,175	147	175,807

From these figures it will be seen that the married females are greatly in excess of the married males at the earlier ages, but at the later ages they are considerably in the minority. The numbers of wives in the three groups between ages 25 and 40 are very nearly equal, and together these ages embrace 48·65 per cent. of all the married women. Of the males 47·07 per cent. are included between ages 30 and 45.

The majority of marriages were contracted between people of suitable ages, though there were, nevertheless, several anomalies. The greater number of married women were mated with husbands five years their senior, and there does not appear any decided tendency of a particular age to mate with ages showing abnormal disproportions. The husbands whose ages exceeded those of their wives by five years and under numbered 62,532, while husbands having wives of a similar age-period numbered 57,162. The next group, viz., husbands having wives from five to ten years younger, exhibits only 28,742, while curiously enough the next place is taken by 10,475 husbands, the ages of whose wives were higher than their own by five years and under.

Of all the married couples in New South Wales, as many as 74·13 per cent. show no greater disparity than five years between the ages of husband and wife. The husbands from 10 to 15 years older than their wives numbered 9,528, and those from 15 to 20 years older, 3,227.

It is eminently undesirable from a sociological point of view that marriages should be contracted between persons of immature age. In New South Wales there is no limit fixed by law as the marriageable age, but the Act regulating marriages provides that the guardian's consent must be obtained in the case of minors. Boys occasionally marry in New South Wales at 16, and girls at 13 or even 12, but happily such occurrences are rare, for few males contract marriage before 21, and not many females before 18. The census returns reveal the fact that the young males under 21 manifest a decided preference for partners about their own period of life, whereas the wives under 18 select, as a rule, spouses between 21 and 30; but it is a matter of common knowledge that many of these very early marriages are compulsory unions. Of the husbands under 21, no less than 370 were living at home with their wives, and 41 of these were married to girls under 18. Of the latter, 2 were aged 18, 11 were aged 19, and 28 aged 20. The total wives under 18 whose husbands were present on the night of the census were 304.

BIRTHPLACES OF HUSBANDS AND WIVES.

The following statement exhibits the number of husbands and wives of various nationalities living in the State at the census of 1901:—

Birthplaces of Husbands.	Birthplaces of Wives.													
	New South Wales.	Other Australian States.	England and Wales.	Scotland.	Ireland.	Other British Possessions.	Germany.	France.	Other European Countries.	United States of America.	Other Foreign Countries.	At Sea.	Not stated.	Total Husbands.
New South Wales	69,115	5,670	5,265	949	2,308	148	166	24	55	134	10	173	24	84,041
Other Australian States	7,644	7,567	1,499	325	552	53	63	12	23	43	7	46	6	17,840
England and Wales	15,743	4,308	16,802	1,209	2,280	170	133	59	88	106	13	119	12	41,042
Scotland	3,160	942	1,241	3,154	627	47	31	8	10	26	4	30	1	9,231
Ireland	4,789	977	977	284	6,959	42	30	10	12	27	1	25	8	14,141
Other British Possessions	534	159	200	37	81	82	4	8	2	7	4	8	..	1,126
Germany	1,019	350	360	59	240	8	768	4	34	9	1	7	5	2,864
France	171	52	62	17	41	3	8	80	16	2	1	2	..	455
Other European Countries	1,211	347	479	97	301	9	63	7	636	12	5	12	4	3,183
United States of America	338	101	116	27	56	15	7	..	2	63	2	3	..	730
Other Foreign Countries	220	67	46	7	15	1	3	3	2	2	62	..	1	429
At Sea	320	82	73	13	43	..	4	1	1	3	2	11	..	553
Not stated	29	6	12	1	6	..	..	..	..	..	..	1	67	122
Total Wives	104,293	20,628	27,132	6,179	13,509	578	1,280	216	881	434	112	437	128	175,807

The married males born in New South Wales comprised 46·83 per cent. of the total number; those of Australian birth generally comprised 57·13 per cent. Similarly, wives born in New South Wales formed 58·96 per cent. of the married females, and those of Australian birth 70·89 per cent. After the Australian born, the English were the most numerous, then the Irish and Scotch. Wives of foreign extraction formed only 1·70 per cent. of the married females.

The wives of Australian birth, as might be anticipated, are mostly young women. Those born outside New South Wales are older, many of them being the survivors of those who emigrated years ago. At the census of 1901 the ages of the married women of the principal birthplaces were as follows :—

Age Group	Birthplace.							
	New South Wales.	Other Australian States.	England and Wales.	Scotland.	Ireland.	Other Countries.	Not stated.	Total.
Under 15	2	......	......	......	......	......	...	2
15—19	2,151	255	89	23	3	38	3	2,562
20—24	15,062	2,560	1,261	266	164	265	13	19,591
25—29	23,395	4,796	2,604	510	708	516	19	32,548
30—34	23,195	5,529	3,064	641	1,565	564	16	34,574
35—39	20,029	4,994	3,930	968	2,440	696	26	33,083
40—44	15,030	3,709	4,284	1,044	2,166	634	20	26,887
45—49	9,161	1,627	4,729	1,045	1,520	634	19	18,735
50 and over ...	13,337	1,086	11,844	2,780	7,560	1,364	32	38,003
Not stated	99	22	19	7	17	3	34	201
Total	121,461	24,578	31,824	7,284	16,143	4,714	182	206,186

From this it may be seen that, although wives of Australian birth comprised 71 per cent. of the whole, those aged 40 and over were less than 53 per cent. of all married women of those ages. Irishwomen were much the oldest, about 47 per cent. of them being over 50. It is therefore apparent that, as immigration has now almost ceased, the mothers of Australian birth will have most influence on future generations.

RELIGIONS OF HUSBANDS AND WIVES.

The number of married men and women professing the principal religions, at the census of 1901, were as follows :—

Religions of Husbands.	Religions of Wives.										
	Church of England.	Roman Catholic.	Methodist.	Presbyterian.	Congregationalist.	Baptist.	Other Christian.	Jew.	Others.	Not stated.	Total Husbands.
Church of England ..	70,550	8,048	1,738	2,078	303	280	325	67	108	19	83,506
Roman Catholic	4,867	31,497	387	544	60	36	121	17	44	7	37,580
Methodist	1,485	548	16,536	322	62	107	126	2	25	3	19,216
Presbyterian	2,719	1,196	424	13,742	67	83	86	11	19	1	18,348
Congregationalist	393	101	83	66	2,981	44	20	1	9	..	3,701
Baptist	275	52	110	65	32	1,856	26	..	8	..	2,419
Other Christian	694	405	220	135	46	44	3,340	2	28	3	4,917
Jew	151	62	13	13	2	1	6	781	4	1	1,034
Others	1,415	780	397	280	79	92	124	8	1,781	5	4,961
Not stated...........	20	13	2	3	2	1	3	..	1	80	125
Total Wives	82,569	42,697	19,910	17,248	3,637	2,544	4,177	889	2,017	119	175,807

The proportions of the married belonging to the principal religions agree fairly closely with those in the general population. The Roman Catholic and "Other Christian" religions both show less proportions than in the general population, while the other religions specified show slightly higher proportions. In considering this table it should be borne in mind that "Other Christian" sects embraces members of the Unitarian body, and adherents of the Salvation Army, and that the last of the series covers not only all other religions, but freethinkers, agnostics, and infidels, besides those who did not profess attachment to any denomination, and those who objected to state the nature of their religious belief. The religion of both husband and wife was ascertained in regard to 172,931 couples, and proved to be the same in 141,918 instances—a proportion of a little over 82 per cent.

MARRIAGES.

The number of marriages celebrated in New South Wales during 1905 was 10,970, corresponding to a rate of 7·42 per 1,000 of the population. The number is the highest on record; but the rate although higher than in 1904, is not so high as in either of the two years preceding 1903. With those exceptions, however, it is the highest since 1888.

The following table shows the number of marriages and the rate per 1,000 of the population at intervals during the last thirty-five years:—

Year.	Marriages registered.	Per 1,000 of mean population.	Year.	Marriages registered.	Per 1,000 of mean population.
1871	3,953	7·78	1897	8,813	6·83
1876	4,630	7·66	1898	8,888	6·77
1881	6,284	8·21	1899	9,275	6·95
1886	7,811	8·06	1900	9,996	7·38
1891	8,457	7·41	1901	10,538	7·68
1892	8,022	6·82	1902	10,486	7·52
1893	7,749	6·44	1903	9,759	6·86
1894	7,666	6·25	1904	10,422	7·21
1895	8,030	6·42	1905	10,970	7·42
1896	8,495	6·69	Mean for 35 years		7·50

Up to the year 1891 the increase in the number of marriages celebrated in New South Wales was remarkably steady, very few checks being experienced; indeed, during the ten years extending from 1877 to 1886 the progress was uninterrupted. But in 1892, despite the growth of population, there was a heavy fall in the number of marriages compared with the previous year; and this decline continued until 1895, when the figures again took an upward movement, although the proportion per 1,000 of the population married did not reach the 1891 level until 1900.

A more exact method of stating the marriage rate is to compare the marriages with the number of marriageable males and females in the community, since it depends very much upon their age whether persons are married or not. It is known that of the bachelors marrying in New South Wales, less than 4 per cent. are outside the ages 20 to 44; and of the spinsters only 1¼ per cent. are outside the ages 15 to 39. These have, therefore, been adopted as the marriageable ages of each sex, and the following table shows, at quinquennial intervals, since 1871 the proportion of bachelors and spinsters married per 1,000 males and females within the specified groups, who had never been married:—

Year.	Proportion of Bachelors married per 1,000 unmarried males aged 20 to 44.	Proportion of Spinsters married per 1,000 unmarried females, aged 15 to 39.
1871	65·60	87·07
1876	64·78	83·66
1881	65·21	82·32
1886	65·08	82·81
1891	57·85	71·28
1896	54·65	58·13
1901	65·92	62·69
1905	64·72	62·87

Among both males and females the rate declined sharply from 1886 to 1891 and from 1891 to 1896, and thereafter recovered during the next five years. The male rate is now very little below what it was thirty years ago, but the female rate is 28 per cent. lower. The number of marriages in a year depends principally upon the number of males open to contract marriage, and it will be seen below that, whereas in 1871 females of marriageable ages were in a minority, they are now in the majority, and thus the heavy fall in the female rate as shown in the preceding table is explained. While the number of females relative to the number of males has been increasing, the proportion of males marrying has remained practically constant. At corresponding periods to those shown above the number of unmarried females aged 15 to 39 to 1,000 unmarried males aged 20 to 44 was as follows:—

Year.	Unmarried females to 1,000 unmarried males.	Year.	Unmarried females to 1,000 unmarried males.
1871	738	1891	813
1876	763	1896	937
1881	791	1901	1,067
1886	784	1905	1,035

The number of females has increased by 297 in the thirty-four years, but part of the increase is due to the decline in the marriage rate, as the proportion open to marry will increase if marriages do not take place.

The following statement shows the marriage rate per 1,000 of the population in each State of the Commonwealth and in New Zealand during the last twelve years:—

State.	1894-1898.	1899-1903.	1904.	1905.
New South Wales	6·60	7·28	7·21	7·42
Victoria	6·30	6·82	6·80	7·24
Queensland	6·02	6·48	5·87	6·04
South Australia	5·99	6·36	6·85	6·94
Western Australia	9·02	9·74	8·83	8·48
Tasmania	6·06	7·44	7·55	7·61
New Zealand	6·55	7·82	8·26	8·28

It will be seen that Western Australia has the highest rate, followed by Tasmania, New South Wales, Victoria, and South Australia in the order mentioned, with Queensland last on the list. In 1904 and 1905 the South Australian rate showed a decided improvement, while the Queensland rate was the lowest.

A comparison of the marriage-rates of various countries is apt to be misleading, on account of the different conditions of life prevailing, and the varying number of marriageable persons therein. Below will be found the average marriage-rates per 1,000 of the population of a number of European countries for the eleven years, 1894–1904. The figures, which are taken from the reports of the Registrar-General of England, show that in Europe, as in New South Wales, the direction of the marriage-rate has been upward:—

Country.	1894-1898.	1899-1903.	1904.
Germany	8·0	8·3	7·9
Austria	8·0	8·0	7·8
England and Wales	7·8	8·0	7·6
France	7·5	7·7	7·6
Italy	7·2	7·2	7·5
Netherlands	7·3	7·5	7·4
Belgium	7·9	8·1	7·1
Scotland	7·0	7·2	7·0
Norway	6·6	6·6	6·0
Ireland	5·0	5·1	5·2

In the majority of cases the rates shown in this table are higher than, or equal to, that in New South Wales.

ILLITERACY DISPLAYED BY MARRIAGE REGISTERS.

The number of persons signing the marriage register with marks has steadily declined for many years past. In 1871 the proportion of signatures made with marks was as high as 16·96 per cent. of the whole, while in 1905 the percentage had fallen to 1·12, the decrease in illiteracy being, therefore, highly satisfactory. The amount of illiteracy, as displayed by inability to sign the marriage register in the proper manner, was for many years greater amongst females than amongst males, the returns showing that this was the case in every year from the commencement of registration to 1887. This order of things was then reversed, although in three years since there has been a slightly greater proportion of mark signatures by females. From this it would appear that women are now in no way behind men in the acquirement of the rudiments of education. In 1871 the number of women who were unable to sign their names amounted to nearly one-fifth of the whole number married, but the proportion had fallen to 1·18 per cent. in 1905. During the same period the male illiterates fell from 14·5 per cent. to 1·07 per cent. of the number of males married:—

Year.	Males signing with marks, per 1,000.	Females signing with marks, per 1,000.	Year.	Males signing with marks, per 1,000.	Females signing with marks, per 1,000.
1871	145	194	1897	16	14
1876	96	114	1898	18	17
1881	55	84	1899	16	12
1886	38	42	1900	15	14
1891	32	29	1901	13	14
1892	33	28	1902	13	11
1893	23	20	1903	12	10
1894	19	20	1904	9	9
1895	22	20	1905	11	12
1896	23	20			

MARRIAGES, IN RELIGIONS.

Of every hundred marriages celebrated in New South Wales, about ninety-five are solemnised by the clergy (including those officiating at Matrimonial Agencies). The actual figures for 1905 show that during that year 10,679 marriages were solemnised by clergy and 291 witnessed by registrars, giving the proportions of 97·35 per cent. and 2·65 per cent. respectively of the total number of 10,970.

The Church of England celebrates the largest number of marriages, the Roman Catholic Church coming next, followed by the Presbyterian and the Methodist Churches. After these, most marriages are celebrated in certain institutions termed "Matrimonial Agencies," which have come into existence during the last eight years, and which combine the easy formalities of a district registrar's office with the attendance of a clergyman. In 1905 there were 582 marriages celebrated at these agencies, representing 5·3 per cent. of the total.

The table below shows the number of marriages celebrated during the five years ended 1905 by the principal denominations, and the percentage which each division bears to the total:—

Denomination.	Marriages, 1900–1904.	Percentage of total Marriages.
Church of England	19,217	36·83
Roman Catholic	9,463	18·14
Presbyterian	7,016	13·45
Methodist	6,830	13·09
Congregational	2,329	4·46
Baptist	869	1·67
Hebrew	139	·27
Other Denominations	1,373	2·63
Matrimonial Agencies	3,508	6·72
Registrars' Offices	1,431	2·74
Total	52,175	100·00

The following table shows the number of marriages registered by the principal denominations during each of the last five years:—

Denomination.	1901.	1902.	1903.	1904.	1905.
Church of England	3,977	3,831	3,577	3,774	4,058
Roman Catholic	1,886	1,927	1,732	1,906	2,012
Presbyterian	1,454	1,356	1,234	1,398	1,574
Methodist	1,417	1,309	1,279	1,371	1,454
Baptist	202	165	170	172	160
Congregational	359	323	431	598	618
Lutheran	19	17	23	30	29
Church of Christ	38	44	45	57	48
Australian Church	28	25	21	10	...
Salvation Army	74	57	44	44	42
Other Sects	344	76	66	76	73
Unitarian	2	7	1	20	13
Hebrew	25	36	39	23	16
District Registrars	298	289	310	243	291
Matrimonial Agencies	415	1,024	787	700	582
Total Marriages	10,538	10,486	9,759	10,422	10,970

CONDITION BEFORE MARRIAGE.

During the year 1905, of the males married 10,250, or 9,344 per 10,000, were bachelors; 661, or 603 per 10,000, were widowers; and 59, or 54 per 10,000, were divorced. Of the females 10,306, or 9,395 per 10,000, were spinsters; 584, or 532 per 10,000, were widows; and 80, or 73 per 10,000, were divorced. The proportion of males remarried was thus 6·6 per cent., and of females 6·1 per cent.

The following table shows in quinquennial periods since 1884 the proportion of first marriages and remarriages per 10,000 males and females respectively:—

Period.	Bachelors.	Widowers and Divorced Men.	Spinsters.	Widows and Divorced Women.
1884–88	9,159	841	9,129	871
1889–93	9,199	801	9,197	803
1894-98	9,181	819	9,177	823
1899-1903	9,222	778	9,285	715
1904	9,260	740	9,320	680
1905	9,344	656	9,395	605

From this it appears that the proportion of persons remarrying has declined both among widowers and widows since the earliest period. From 1888 to 1893 there was a sharp decline; during the next five years there was a slight recovery, but since 1898 the fall has been continuous.

AGE AT MARRIAGE.

Of the 10,970 couples married in 1905, the ages of 10,969 bridegrooms and of 10,966 brides are known. An examination of the figures shows that in 75·4 per cent. of the marriages the husband was older that the wife; in 9·2 per cent. the ages of the contracting parties were the same; while in the remaining 15·4 per cent. of the unions the bride was older than the bridegroom. The results of a tabulation of the respective ages of bridegrooms and brides are shown in the following table:—

Ages of Bridegrooms.	Ages of Brides.												
	Under 18.	18.	19.	20.	21—24	25—29	30—34	35—39	40—44	45—49	50 and over.	Not stated	Total.
Under 18 years	5	1	..	..	2	..	..	..	..	..	..	..	8
18 years	13	11	9	3	8	..	..	..	..	..	..	..	44
19 ,,	29	32	25	22	29	5	..	1	..	..	..	..	143
20 ,,	39	42	39	42	66	11	..	..	..	..	..	..	[illegible]
21—24	210	299	397	364	1,693	338	46	6	3	..	..	..	3,356
25—29	117	161	212	257	1,529	1,079	195	34	9	2	..	..	3,595
30—34	31	36	69	79	563	598	290	79	10	1	3	1	1,760
35—39	14	14	15	32	177	271	191	92	32	5	1	2	846
40—44	4	3	6	8	58	121	102	72	46	19	8	..	447
45—49	1	1	2	3	26	44	39	61	26	27	11	..	241
50 and over	1	2	2	2	16	26	29	47	56	41	68	..	[illegible]
Not stated	..	..	..	..	..	..	..	..	..	..	..	1	1
Total	464	602	776	812	4,167	2,493	892	392	182	95	91	4	10,970

The following statement shows the average age at marriage of both bridegrooms and brides for each of the last nine years. Unfortunately 1897 is the first year for which information concerning the ages of the parties at marriage is available, but there is other evidence to show that the average age at marriage has been gradually increasing, and for males it is probably two and a half years, and for females one and a half years higher than it was twenty years ago. The causes of the postponement of marriage cannot be entered into here, but it is certain that the later age at marriage of females has a material influence on the birth-rate. The difference between the ages at marriage of males and females is a little over four years, the males being the older.

Year.	Average age of Bridegrooms.	Average age of Brides.	Year.	Average age of Bridegrooms.	Average age of Brides.
	Years.	Years.		Years.	Years.
1897	29·37	24·92	1902	29·25	25·03
1898	29·53	24·99	1903	29·20	25·04
1899	29·31	24·98	1904	29·00	24·93
1900	29·15	25·03	1905	29·13	24·96
1901	29·08	24·91			

The average age at marriage both of bridegrooms and brides has remained very nearly constant during the last nine years, although there has been a slight tendency to a lower average on the part of bridegrooms.

It should be remembered that the above figures relate to all persons marrying during the year, and include those remarrying. The averages of those marrying for the first time during 1905 was, of bachelors 28·20 years, and of spinsters 24·37 years, or about a year in each case lower than those above.

MARRIAGE OF MINORS.

The number of persons under 21 years of age married during 1905 was 3,088, or 14·07 per cent. of the total. The proportion of bridegrooms who were minors was 3·96 per cent. and of brides 24·19 per cent. In both cases the figures were high, and above the average. The figures for the last ten years are appended:—

Year.	Minors.		Percentage of—	
	Bridegrooms.	Brides.	Bridegrooms.	Brides.
1896	212	2,065	2·50	24·31
1897	274	2,156	3·11	24·46
1898	242	2,110	2·72	23·74
1899	262	2,202	2·82	23·74
1900	294	2,297	2·94	22·98
1901	351	2,546	3·33	24·16
1902	309	2,372	2·95	22·62
1903	320	2,249	3·28	23·05
1904	395	2,506	3·79	24·05
1905	434	2,654	3·96	24·19

Notwithstanding that the average age of both bridegrooms and brides has been increasing, the proportion who are minors does not show any signs of decrease. This fact is interesting, but it is easier to speculate as to the reason than to arrive at a sufficient explanation from the statistics relating to marriages and births.

BIRTHS.

The number of births during 1905 was 39,501, equal to a rate of 26·72 per 1,000 of the total population. The actual number of births was the highest in any year since 1893, but the rate, with the exception of 1903, was the lowest on record. The birth-rate, which fell away sharply after 1888, has been declining more or less ever since, and is now 28 per cent. below the figure for that year. The following table shows the births and birth-rate per 1,000 of the total population since 1871 :—

Year.	Births.	Birth-rate per 1,000 of Population.	Year.	Births.	Birth-rate per 1,000 of Population.
1871	20,143	39·64	1895	38,774	31·00
1876	23,298	38·56	1896	36,506	28·73
1881	28,993	37·90	1897	37,247	28·87
1886	36,284	37·43	1898	36,222	27·60
1887	37,236	37·06	1899	36,461	27·34
1888	38,525	37·20	1900	37,146	27·43
1889	37,295	34·97	1901	37,875	27·60
1890	38,960	35·36	1902	37,835	27·15
1891	39,458	34·55	1903	35,966	25·28
1892	40,041	34·02	1904	38,667	26·73
1893	40,342	33·53	1905	39,501	26·72
1894	38,951	31·75			

These rates are based on the total population—that is, not taking into consideration either the age or sex distribution. It is unsatisfactory, for several reasons, so to measure the birth-rate—the most preferable method, and one often adopted, is to calculate the number of legitimate births per 1,000 married women of reproductive ages (from 15 to 45). This has been done in the following table, which shows the birth-rate per 1,000 married women in three-year periods since 1883 :—

Period.	Legitimate Births.	Birth-rate per 1,000 Married Women, aged 15–44.	Period.	Legitimate Births.	Birth-rate per 1,000 Married Women, aged 15–44.
1883–85	95,845	340·5	1901	35,163	235·3
1886–88	106,689	333·7	1902	35,338	230·3
1889–91	109,560	299·2	1903	33,558	215·2
1892–94	112,098	278·3	1904	35,912	227·2
1895–97	105,106	247·3	1905	36,589	228·0
1898–1900	102,104	227·8			

Like the preceding table, this shows that the decline has been great, especially since 1888. Unlike that table, however, it shows a slight increase in the rate in 1905. It is therefore apparent that the true experience was not altogether shown by the crude method of comparing the births with the total population, although the general tendency of the two tables is very similar.

The birth-rate per 1,000 of the population of each State of the Commonwealth and of New Zealand, during the last twelve years, is given in the following table :—

State.	1894-1898.	1899-1903.	1904.	1905.
New South Wales	29·55	26·94	26·73	26·72
Victoria	27·50	25·46	24·64	24·83
Queensland	30·53	27·59	26·86	25·92
South Australia	28·30	24·87	24·70	23·66
Western Australia	26·56	30·47	30·34	30·30
Tasmania	29·64	28·29	29·59	29·32
New Zealand	26·41	25·93	26·94	27·22

There is not a great deal of difference between the rates in the various States. South Australia is the lowest, and Western Australia the highest. The comparatively high rate in the Western State is due to the larger proportion of married women in its population. Generally the decline, which has characterised the birth-rates not only of Australian but also of European countries, has continued.

The birth-rate for Australia will be found to be lower than in most of the countries of the old world, as is shown in the following statement, which gives the birth-rates of some of the principal countries during the eleven years ending in 1904 :—

Country.	1894-1898.	1899-1903.	1904.
Austria	37·7	36·9	35·1
Germany	36·2	35·7	33·9
Italy	34·7	32·9	32·6
Netherlands	32·5	31·8	31·4
Scotland	30·1	29·5	28·6
Norway	30·2	29·7	28·2
England and Wales	29·7	28·6	27·9
Belgium	28·8	28·6	27·5
Ireland	23·4	22·9	23·6
France	22·1	21·6	20·9

BIRTH-RATES—METROPOLIS AND COUNTRY.

If the State be divided into the metropolitan and country districts, there were during 1905, in the former, 13,769 births, and in the latter 25,732, corresponding to rates of 26·27 and 26·96 per 1,000 of population respectively. The country has shown a higher rate than the metropolis since 1893, but prior to that year the contrary was the case :—

Year.	Births per 1,000 of population.			Year.	Births per 1,000 of population.		
	Metropolis.	Country.	New South Wales.		Metropolis.	Country.	New South Wales.
1886	43·70	34·61	37·43	1896	27·41	29·45	28·73
1887	42·39	34·60	37·06	1897	26·24	30·31	28·87
1888	41·09	35·35	37·20	1898	25·49	28·77	27·60
1889	37·97	33·50	34·97	1899	25·67	28·27	27·34
1890	36·53	34·77	35·36	1900	24·95	28·81	27·43
1891	35·89	33·86	34·55	1901	25·65	28·69	27·60
1892	34·55	33·74	34·02	1902	25·86	27·88	27·15
1893	33·32	33·64	33·53	1903	25·01	25·43	25·28
1894	30·72	32·30	31·75	1904	25·67	27·32	26·73
1895	29·00	32·09	31·00	1905	26·27	26·96	26·72

The highest rate exhibited for the whole of New South Wales during the last twenty years was 37·43 in 1886. The maximum rate for the metropolis was reached in 1886, when the births were 43·70 per thousand of the population. In the country districts the greatest number of births in proportion to the population occurred in 1888, when the rate was 35·35 per thousand.

The rate has been declining in the country districts since the earliest period, but not to the same extent as in the metropolis. The greatest fall in the metropolis was from 1888 to 1893, and in the country five years earlier. The high rate in the metropolis during the five years 1884 to 1888 was probably due to the fact that those years and the few immediately preceding were years of heavy immigration.

SEXES OF CHILDREN BORN.

Of the 39,501 children born during the year, 20,206 were males and 19,295 were females, the proportion being 105 males to 100 females; and in no year, so far as observation extends, have the female births exceeded in number those of males, although the difference has sometimes been very slight. The preponderance of births of male children in New South Wales during a number of years will be seen from the table given below. The figures are exclusive of children stillborn, the births of which are not required to be registered:—

Year.	Males.	Females.	Persons.	Year.	Males.	Females.	Persons.
1871	10,326	9,817	20,143	1899	18,613	17,848	36,461
1876	11,791	11,507	23,298	1900	18,964	18,182	37,146
1881	14,891	14,102	28,993	1901	19,149	18,726	37,875
1886	18,700	17,584	36,284	1902	19,322	18,513	37,835
1891	20,386	19,072	39,458	1903	18,377	17,589	35,966
1896	18,691	17,815	36,506	1904	19,857	18,810	38,667
1897	18,989	18,258	37,247	1905	20,206	19,295	39,501
1898	18,723	17,499	36,222				

The excess of males over females born during the past thirty years has ranged from 2 per cent. in 1876 and 1901, to 8 per cent. in 1899, the average being 5·3 per cent.

The following table shows the number of males born to every 100 females, both in legitimate and illegitimate births during the last twenty years:—

Year.	Legitimate Births.	Illegitimate Births.	All Births.	Year.	Legitimate Births.	Illegitimate Births.	All Births.
1886	106·7	98·7	106·4	1896	105·6	95·4	104·9
1887	103·5	95·3	103·1	1897	103·9	105·4	104·0
1888	104·2	96·2	103·7	1898	107·2	104·0	107·0
1889	108·1	100·7	107·7	1899	104·0	108·2	104·3
1890	104·2	104·7	104·3	1900	104·4	103·2	104·3
1891	107·0	105·7	106·9	1901	101·8	108·5	102·3
1892	105·3	103·8	105·2	1902	104·4	103·7	104·4
1893	106·7	105·7	106·7	1903	105·0	97·8	104·5
1894	105·4	107·1	105·5	1904	105·9	100·8	105·6
1895	104·6	114·1	105·2	1905	104·9	102·5	104·7

Generally speaking, in illegitimate births there is a greater equality of the sexes than in legitimate, and in some years they actually show a majority of female children, such instances having occurred five times during the last twenty years. It is a curious coincidence that the proportion of males born out of wedlock was abnormally low in 1886, and abnormally high in 1901, while the reverse was the case in regard to legitimate births in those years.

ILLEGITIMACY.

The number of illegitimate births in 1905 was 2,912, equal to 7·37 per cent. of the total births. A statement of the illegitimate births in New South Wales, distinguishing metropolitan and country districts since 1885, is given below, and taking the whole period over which the table extends, it will be seen that the proportion has constantly increased throughout the State, notably in the city and suburbs of Sydney:—

Year.	Number of Illegitimate Births.			Percentage of Total Births.		
	Metropolis.	Country Districts.	New South Wales.	Metropolis.	Country Districts.	New South Wales.
1885	845	767	1,612	6·89	3·37	4·60
1890	1,056	995	2,051	7·81	3·91	5·26
1895	1,219	1,305	2,524	9·55	5·02	6·51
1896	1,189	1,256	2,445	9·66	5·19	6·70
1897	1,176	1,276	2,452	9·79	5·06	6·58
1898	1,233	1,278	2,511	10·35	5·25	6·93
1899	1,305	1,304	2,609	10·66	5·38	7·16
1900	1,222	1,383	2,605	10·08	5·53	7·01
1901	1,343	1,369	2,712	10·66	5·42	7·16
1902	1,243	1,254	2,497	9·56	5·05	6·60
1903	1,278	1,135	2,413	10·02	4·89	6·71
1904	1,343	1,412	2,755	10·16	5·55	7·12
1905	1,530	1,382	2,912	11·11	5·37	7·37

It is possible that the smaller proportion of illegitimate births noticeable in the country districts is, to some extent, due to the fact that women who have fallen come to Sydney to hide their shame, or to take advantage of the benefits provided by the large maternity hospitals of the metropolis.

The proportions given in the above table are to a large extent misleading, as will be seen from the following table. The method of stating the illegitimate as a proportion of the total births is somewhat erroneous, because the illegitimate births have no necessary correspondence with the legitimate births, and because they are compared with a standard which has been declining for several years, and which is likely to vary under any conditions.

The only certain way is to compare the births with the number of unmarried females of the reproductive ages, as has been done in the following table, which shows the proportion of illegitimate births per 1,000 unmarried women at the periods stated:—

Year.	Unmarried Women, aged 15-44.	Illegitimate Births.	Birth-rate per 1,000 Unmarried Women.
1881	72,380	1,263	17·45
1886	91,940	1,687	18·35
1891	117,960	2,115	17·93
1896	140,820	2,445	17·36
1901	166,340	2,712	16·30
1902	169,320	2,497	14·75
1903	172,770	2,413	13·97
1904	175,920	2,755	15·66
1905	179,300	2,912	16·24

These figures make it clear that illegitimacy is not constantly increasing, as might be judged from the preceding table, but is tending to decrease. The rate was lowest in 1903, and has since increased. In 1905 it was below that in 1901, which was lower than in any previous year. On the whole, the illegitimate rate shown above follows the course of the legitimate rate shown on the preceding page.

Illegitimacy is a social evil, and the following figures show with what calamitous results it is attended. The table appended gives, for 1905, and for the five years preceding 1905, the death-rates of illegitimate children under 1 and under 5 years of age, as compared with legitimate children of like ages :—

Age.	Legitimate.		Illegitimate.		Total.	
	Deaths.	Rate per 1,000 living.	Deaths.	Rate per 1,000 living.	Deaths.	Rate per 1,000 living.
Under 1 year—						
1900-1904	15,712	90·04	3,361	253·90	19,073	101·73
1905	2,648	72·37	534	183·38	3,182	80·55
Under 5 years—						
1900 1904	21,473	28·35	3,809	85·40	25,262	31·52
1905	3,537	22·69	606	62·73	4,143	25·02

It will be seen how unfavourable is the position, and how small is the chance of living of the illegitimate child as compared with the legitimate. At each age the death-rate of the illegitimate is nearly three times that of the legitimate. Even in 1905, which was a year of extremely low mortality, one-fifth of the illegitimate children born did not live through the first year. The disastrous effect of illegitimacy on infantile mortality is very much to be deplored, as the saving of life at these early ages is perhaps more important than at any subsequent age.

An Act to legitimate children born before marriage on the subsequent marriage of their parents was passed in 1902. Under the provisions of this Act such children are deemed to be legitimated on registration, and entitled to all the rights of a child born in wedlock. There were 6 registrations in 1902, 158 in 1903, 173 in 1904, and 175 in 1905.

PLURAL BIRTHS.

During the year 1905 there were five cases of triplets, comprising 9 males and 6 females, and 411 cases of twins, comprising 403 males and 418 females—in all, 821 children, one born dead not being included. Of the 416 cases of plural births during 1905, 396 were legitimate and 20 illegitimate. The number of children born as triplets and twins formed 2·12 per cent. of the total births.

The following table shows the number of cases of twins, triplets, and quadruplets born in New South Wales during the thirteen years 1893–1905, excluding those stillborn, and distinguishing legitimate and illegitimate :—

Cases of—	Legitimate.	Illegitimate.	Total.
Twins	4,757	253	5,010
Triplets	46	3	49
Quadruplets	3	...	3

The total number of confinements recorded during the thirteen years was 486,386. It follows, therefore, that one mother in every 97 gave birth to twins; one mother in every 9,926 was delivered of three children, and one in every 162,129 of four children at a birth. Stated in another way, there were 10·4 plural births in every 1,000 total births.

The smallest proportion of plural births is found amongst women below age 20; the proportion increases steadily with the age of the mothers until it reaches a maximum with women between the ages of 35 and 40 years, after which there is a decline, but the decline does not bring the ratio back to its starting-point, for at ages 45 to 50 the plural births are 1 to every 109 confinements recorded, whereas at age 20 and under the proportion is 1 to 205.

The results of the observations for the thirteen years 1893–1905 will be found in the following table; the figures refer to legitimate births only:—

Age Group of Mothers.	All Births.	Plural Births.	Plural Births per 1,000 of all Births.
Under 20 years	17,005	83	4·88
20–24 „	100,360	644	6·42
25–29 „	127,662	1,235	9·67
30–34 „	104,061	1,388	13·34
35–39 „	72,647	1,078	14·84
40–44 „	28,551	351	12·29
45–49 „	2,930	27	9·22

It is a remarkable fact that of 4,806 births, 2,844 occurred to mothers whose ages were 30 years or upwards; this gives a proportion of 59 per cent., whereas of all legitimate births only 46 per cent occurred at those ages.

EXCESS OF BIRTHS OVER DEATHS.

The excess of births over deaths was 24,523 in 1905, and was the highest in any year since 1892. The excess of births over deaths does not show a steady increase or decrease, but fluctuates somewhat, as might be expected. In the whole State during the twenty-six years from 1880 to 1905, the least excess was 16,886 in 1882, and the highest 25,631 in the year 1892. In the metropolis the least excess was in 1880, viz., 3,434, and the highest in 1892, when the number reached 8,558. In the country districts the number ranged from 12,278 in 1882 to 17,073 in 1892:—

Year.	Metropolis.	Country Districts.	New South Wales.			Per cent. of population at end of previous year.
			Males.	Females.	Persons.	
1896	6,713	13,954	9,435	11,232	20,667	1·62
1897	6,789	16,194	10,675	12,308	22,983	1·77
1898	5,550	14,011	9,087	10,474	19,561	1·48
1899	6,728	13,832	9,482	11,078	20,560	1·55
1900	6,625	15,403	10,013	12,015	22,028	1·64
1901	6,404	15,450	9,822	12,032	21,854	1·60
1902	7,065	14,124	9,787	11,402	21,189	1·54
1903	6,836	12,633	8,949	10,520	19,469	1·38
1904	7,540	15,767	11,124	12,183	23,307	1·63
1905	7,999	16,524	11,497	13,026	24,523	1·68

The natural increase is now 1½ per cent., as against 2¼ per cent. twenty years ago, the falling-off being entirely due to the decline in the birth-rate, as there has been a constant improvement in the death-rate.

Notwithstanding the fact that the males born are more numerous than the females, the actual increase of population from the excess of births over deaths is greatly in favour of the females. The male population exceeds the female, and there is a correspondingly larger number of deaths of males. There is also a greater mortality amongst male than amongst female children, and from this cause alone the natural excess of male births is almost neutralised. During the ten years which closed with 1905, the number of females added to the community by excess of births exceeded the males by 16,399, or 16 per cent.

AGES OF MOTHERS.

During the thirteen years 1893–1905 the ages of the women giving birth to children ranged from 11 to 58 years. As might be expected, the majority of the very young mothers were unmarried; thus of 6,182 mothers under 18 years of age, 3,331 were unmarried. The total number of married women who gave birth to children during the thirteen years was 453,262, the ages of whom were as follow. The proportion of mothers at each age per 10,000 of all ages is also shown:—

Ages of Married Mothers.	Number of Mothers.	Number of Mothers at each age per 10,000.	Ages of Married Mothers.	Number of Mothers.	Number of Mothers at each age per 10,000.
Years.			Years.		
14	16	...	29	24,190	534
15	86	2	30–34	104,061	2,296
16	594	13	35–39	72,647	1,603
17	2,155	48	40–44	28,551	630
18	5,048	111	45–49	2,930	65
19	9,106	201	50	15	...
20	12,208	269	51	1	...
21	17,472	386	52	6	...
22	21,084	465	53	3	...
23	24,109	532	55	2	...
24	25,487	562	56	1	...
25	25,692	567	58	1	...
26	26,089	576	Not stated..	17	...
27	25,652	566			
28	26,039	574	Total......	453,262	10,000

It will be seen that in two cases the age of the mother is stated as 55 years; in another case, as 56 years; and in still another case, as 58. As these four cases were outside the usual experience, inquiries were made, with the result that the accuracy of the records was confirmed. It may be mentioned that in the first two cases the ages of the fathers were 45 and 55 years; in the third case, 58 years; and in the fourth case, 64 years. It is found that the age of the mothers of one-fourth of the children born does not exceed 25 years, and that before women pass their twenty-ninth year they give birth to one-half their offspring. Only 10 per cent. of the births occur after age 38, and less than 7 per cent. after age 40 is reached.

Similar information regarding the ages of the fathers might also be shown, but is omitted because it has been found that the age of the mother is by far the most important factor in deciding the number of children who will be born.

The mothers of illegitimate children are in some cases very young, as will be seen from the following table, which gives the ages of the mothers

DEATHS.

The deaths during 1905 numbered 14,978, equal to a rate of 10·13 per 1,000 of the population, which is 5 per cent. below the mean rate of the last ten years, and is the lowest on record. This total includes 8,709 males and 6,269 females, so that amongst males the rate was 11·11 and amongst females 9·03 per 1,000, living of each sex respectively. The number of deaths of each of the sexes, with the rate per thousand, from 1871 to 1905 is given below:—

Year.	Number of Deaths.			Death-rate per 1,000 of Population.		
	Males.	Females.	Total.	Males.	Females.	Total.
1871	3,882	2,525	6,407	13·98	10·95	12·61
1876	6,508	4,685	11,193	19·82	16·98	18·52
1881	6,753	4,783	11,536	16·12	13·82	15·08
1886	8,501	6,086	14,587	15·95	13·95	15·05
1891	9,558	6,728	16,286	15·44	12·86	14·26
1892	8,544	5,866	14,410	13·38	10·82	12·24
1893	9,289	6,733	16,022	14·36	12·10	13·32
1894	8,714	6,456	15,170	13·25	11·34	12·36
1895	8,671	6,243	14,914	12·98	10·71	11·92
1896	9,256	6,583	15,839	13·69	11·08	12·47
1897	8,314	5,950	14,264	12·12	9·85	11·05
1898	9,636	7,025	16,661	13·83	11·41	12·69
1899	9,131	6,770	15,901	12·93	10·79	11·92
1900	8,951	6,167	15,118	12·52	9·64	11·16
1901	9,327	6,694	16,021	12·94	10·28	11·68
1902	9,535	7,111	16,646	13·03	10·74	11·94
1903	9,428	7,069	16,497	12·58	10·50	11·59
1904	8,733	6,627	15,360	11·44	9·70	10·62
1905	8,709	6,269	14,978	11·11	9·03	10·13

The death-rate has fallen steadily from the year 1876 to the present time amongst both sexes, but slightly more for males than females. The death-rate for males is, however, about one-sixth higher than for females, the reason being that males are exposed to more risks than females, and that male infants are the more delicate. It will be noticed that the death-rate has declined most largely during the last fourteen years, and is thus coincident with the decline in the birth-rate. The falling birth-rate has influenced the death-rate in so far as it has affected the age-constitution of the population by reducing the proportion living at the first five years where the mortality is high, and at the same time increased the proportion living from 5 to 20 where the mortality is low.

For comparative purposes a table of the death-rates per thousand for each of the Australian States and New Zealand during the last eleven years is given below:—

State.	1894–1898.	1899–1903.	1904.	1905.
New South Wales	12·10	11·66	10·62	10·13
Victoria	13·71	13·24	11·92	12·10
Queensland	11·92	12·03	10·01	10·47
South Australia	11·89	11·37	10·22	10·15
Western Australia	16·43	13·21	11·91	10·83
Tasmania	12·55	11·43	11·01	10·29
New Zealand	9·63	10·08	9·57	9·27

It will be seen that New South Wales occupied the second place on the list in 1905, the most favourable rates being shown by New Zealand, New South Wales, South Australia, and Tasmania, in the order named.

The latest available information for the United Kingdom and for European countries refers to the year 1904, and the comparatively favourable conditions of Australasia will be manifest from an inspection of the following rates :—

Country.	1894–1898.	1899–1903.	1904.
Austria	26·9	24·9	23·8
Italy	23·8	22·4	20·9
Germany	22·2	20·8	20·0
France	20·7	20·4	19·4
Ireland	18·0	18·0	18·1
Belgium	18·1	17·9	17·0
Scotland	17·9	17·7	16·8
England and Wales	17·5	17·0	16·2
Netherlands	17·6	16·8	15·9
Norway	15·7	15·3	14·4

It might have been expected that in any case the rates in these countries would be higher than in New South Wales on account of the larger proportions of old persons in their populations, but in addition it must be remembered that scourges of the old world such as cholera and small-pox are unknown in Australia, while apart from climatic conditions, which are most favourable here, the social condition of the great body of the people is far superior to that of Europeans, and their occupations more healthful.

DEATHS—METROPOLIS AND COUNTRY.

It is not possible to show the exact difference between urban and rural mortality in New South Wales, but an approximate idea may be obtained from considering the experience of the metropolis and the country districts, although a few large towns are comprised in the latter. Separating the State, therefore, into these two broad divisions, there were, during 1905, 5,770 deaths in the metropolis and 9,208 in the country, corresponding to the rates of 11·01 and 9·65 per 1,000 living respectively. The rate per thousand in each of these divisions during the last twenty years is given in the subjoined table :—

Year.	Metropolis.		Country Districts.		New South Wales.	
	Deaths.	Rate per 1,000.	Deaths.	Rate per 1,000.	Deaths.	Rate per 1,000.
1886	6,269	20·87	8,318	12·43	14,587	15·05
1887	5,546	17·52	7,902	11·48	13,448	13·38
1888	6,258	18·76	8,150	11·61	14,408	13·91
1889	6,338	18·03	8,458	11·83	14,796	13·87
1890	5,591	15·10	8,627	11·79	14,218	12·90
1891	6,420	16·45	9,866	13·13	16,286	14·26
1892	5,512	13·54	8,898	11·56	14,410	12·24
1893	6,484	15·48	9,538	12·16	16,022	13·32
1894	5,888	13·71	9,282	11·64	15,170	12·36
1895	5,485	12·47	9,429	11·63	14,914	11·92
1896	5,589	12·45	10,250	12·47	15,839	12·47
1897	5,220	11·41	9,044	10·86	14,264	11·05
1898	6,363	13·61	10,298	12·19	16,661	12·69
1899	5,511	11·56	10,390	12·13	15,901	11·92
1900	5,502	11·32	9,616	11·07	15,118	11·16
1901	6,197	12·62	9,824	11·15	16,021	11·68
1902	5,937	11·81	10,709	12·02	16,646	11·94
1903	5,913	11·60	10,584	11·59	16,497	11·59
1904	5,675	11·02	9,685	10·40	15,360	10·62
1905	5,770	11·01	9,208	9·65	14,978	10·13

Both in the metropolis and the country the rate has steadily improved, but very much more in the metropolis, so that there the rate is now very little higher than in the country districts, whereas twenty years ago it was 50 per cent. higher. The fall began in the metropolis after 1889, the year when the improved sewerage system was installed, and about the same time that the Dairies Supervision Act came into operation. The decline that has taken place in the rates for each division and for the State during the twenty years covered by the table will be further emphasized when it is stated that the metropolitan rate fell from 20·87 to 11·01 per 1,000, or 47 per cent. The rate in country districts declined from 12·43 to 9·65, or 22 per cent., and for the whole State from 15·05 to 10·13, or 33 per cent.

MORTALITY OF INFANTS.

A further measure of the mortality in the metropolis and country, and one that offers a most sensitive test is obtained by a comparison of the death-rates of infants in each district.

The number of children under 1 year of age who died in 1905 was 3,182, equal to a rate of 80·6 per 1,000 births. To this total the metropolis contributed 1,230 deaths, or 89 per 1,000 births, and the country 1,952, or 76 per 1,000 births.

The next table gives the number of children under 1 year dying, in quinquennial periods, since 1879, in the metropolis and country, and the proportion per 1,000 births :—

Period.	Metropolis.		Country.		New South Wales.	
	Deaths under 1.	Rate per 1,000 Births.	Deaths under 1.	Rate per 1,000 Births.	Deaths under 1.	Rate per 1,000 Births.
1879–83	7,701	171·0	9,213	92·1	16,914	116·6
1884–88	10,582	164·3	11,150	97·3	21,732	121·4
1889–93	10,079	144·1	12,240	96·2	22,319	113·8
1894–98	8,521	137·0	12,487	99·5	21,008	111·9
1899–1903	7,252	115·6	12,963	105·7	20,215	109·1
1904	1,300	98·4	1,887	74·1	3,187	82·4
1905	1,230	89·3	1,952	75·9	3,182	80·6

The infantile mortality rate has improved most in the metropolis, in fact, up to 1903, it was increasing in the country districts. In the year 1904 there was a decrease amounting to 25 per cent., compared with the previous five years, and this improvement continued in 1905. The rate in the country districts has always been more favourable than that in the metropolis, although it will be seen that the difference is not now nearly so great as twenty or even ten years ago.

Further, of the 14,978 people who died during 1905, 10,835 were of the age of 5 and over, and 4,143 were under that age, giving rates of 8·25 and 25·02 per 1,000 living in each group respectively. In the metropolis the rates were 8·98 and 28·55 respectively. Comparing the deaths in the metropolis and in the country districts, and taking the deaths of persons over 5 years of age during the twenty-seven years covered by the table below, it will be found that the rates for the metropolitan district and the country are not only favourable but more equal for all persons. In 1894–98 the rate was actually lower in the metropolis. In 1904 it was identical in both divisions.

Turning to deaths of children under 5 years, the chief factor of the excessive death-rate of the city and suburbs will be found. At every period the metropolitan rate is the higher—in some cases over 50 per cent., and never less than 16 per cent.

The following table shows the mortality in the metropolitan and country districts, in quinquennial periods, during the last twenty-seven years. In the first part of the table will be found the actual number of deaths, and in the second the proportion of deaths of children under 5 years, and of persons over that age, as compared with the population of each group:—

Period.	Deaths of Children under 5 years.			Deaths of Persons of 5 years and over.		
	Metropolis.	Country Districts.	N.S.W.	Metropolis.	Country Districts.	N.S.W.
			NUMBER OF DEATHS.			
1879–83	11,105	13,819	24,924	12,051	21,057	33,108
1884–88	14,727	16,234	30,961	15,765	25,219	40,984
1889–93	14,161	17,547	31,708	16,184	27,840	44,024
1894–98	11,595	17,019	28,614	16,950	31,284	48,234
1899–1903	9,411	17,264	26,675	19,649	33,859	53,508
1904	1,722	2,647	4,369	3,953	7,038	10,991
1905	1,555	2,588	4,143	4,215	6,620	10,835
			RATE PER 1,000 OF POPULATION OF EACH GROUP.			
1879–83	72·11	33·48	43·97	12·02	9·56	10·33
1884–88	69·30	32·57	43·55	12·19	8·96	9·97
1889–93	52·22	31·57	38·34	9·72	8·71	9·05
1894–98	42·47	29·56	33·72	8·60	8·86	8·77
1899–1903	37·09	31·52	33·28	8·99	8·76	8·81
1904	32·47	24·28	26·96	8·56	8·56	8·56
1905	28·55	23·30	25·02	8·98	7·85	8·25

A remarkable improvement may be noticed in the death-rate of the metropolis, both for ages over and under 5 years, especially during the third period, that is, after 1888. In the country the rates did not vary a great deal over the whole period until 1904, when there was a great improvement among children under 5, which was maintained in 1905 Amongst children under 5, the rate increased during the period 1899–1903. The fall during 1904 and 1905 in both groups was most satisfactory. Compared with twenty years ago, the decreases in the rates represent a saving of the lives of 41 children in every 1,000 under 5 in the metropolis, and 9 in every 1,000 in the country.

INDEX OF MORTALITY.

It is well-known that the ages of the population considerably affect the death-rate of a country, and in order to compare the death-rates of the Australian States on a uniform age basis, the population of Sweden, in five age-groups, as ascertained at the census of 1890, has been adopted as the standard population by which the index of mortality should be calculated. Applying the co-efficient of mortality in each age-group in each State and capital city of Australia to the age constitution of the standard population the index of mortality during 1905 is found to be as follows. For purposes of comparison the crude rates are attached :—

State.	Index of Mortality.	Death-rate.	City.	Index of Mortality.	Death-rate.
New South Wales	13·53	10·13	Sydney	15·02	11·01
Victoria	14·55	12·10	Melbourne	16·02	12·88
Queensland	14·53	10·47	Brisbane..................	16·96	12·14
South Australia	13·52	10·15	Adelaide......	15·28	11·70
Western Australia......	14·41	10·83	Perth	21·22	16·28
Tasmania	13·36	10·29	Hobart	18·10	15·24

Leaving out Perth and Hobart there is no great difference between the rates of the Australian cities. Sydney has the most favourable rate of all the capitals, with New South Wales third amongst the States. The high rate for Western Australia is due largely to the infantile mortality, and in Perth the rate is high in all age-groups. Tasmania has the lowest general rate, but Hobart is only a little below Perth, where the rate is the highest of all the capital cities. The crude rate of Western Australia is the highest, but the adjusted rate is lower than that of either Victoria or Queensland.

AGES AT DEATH.

The following table shows the death-rate per 1,000 living at various ages of males and females in 1905, and in the ten years 1895 to 1904. The age and sex distribution of a population are most important factors in determining the death-rate ; for instance, the rates at ages 5 to 50 are lower than for the whole population, so that a country with a high proportion at those ages, as is the case in New South Wales, might expect to have a low death-rate. Again, a country with a high proportion of females will most likely have a favourable death-rate.

Age Groups.	Males.		Females.		Persons.	
	1895-1904.	1905.	1895-1904.	1905.	1895-1904.	1905.
Under 5 years	34·57	27·54	30·66	22·44	32·64	25·02
5— 9 ,, ...	2·40	1·50	2·28	1·69	2·34	1·59
10—14 ,, ...	1·98	1·48	1·73	1·31	1·87	1·40
15—19 ,, ...	3·13	2·54	2·76	2·53	2·95	2·54
20—24 ,, ...	4·25	3·68	3·94	3·48	4·09	3·58
25—34 ,, ...	5·49	4·73	5·57	4·54	5·53	4·64
35—44 ,, ...	8·57	6·65	7·73	6·92	8·21	6·87
45—54 ,, ...	14·08	13·62	10·74	10·46	12·69	12·30
55—64 ,, ...	28·06	25·56	20·49	19·45	24·87	22·96
65 and over	79·89	77·35	68·02	71·30	74·96	74·85
All Ages......................	12·79	11·11	10·46	9·03	11·69	10·13

The above rates are put forth with a certain amount of diffidence, as the numbers living in the various age-groups depend upon estimates, and these become less trustworthy as the distance from the Census increases. The last Census was taken in March, 1901. Similar remarks apply to the other rates in age-groups in this chapter.

At ages under 5 the rate is higher than at any subsequent age up to 65. The rate is at a minimum at ages 10 to 14, after which it rises slowly to age 55, and then increases rapidly. At ages 5 to 50 the rate is below the mean rate for the whole population, and at all ages the rate for males is higher than that for females.

It has already been stated that 1905 was a year of exceptionally low mortality, and the reason is seen above. At all the younger ages there was a most gratifying fall in the rates, especially for ages under 10, as compared with the averages of the preceding ten years.

Among the persons who died during 1905 were 2 males and 3 females who were said to be 100 years of age and over. The ages of these centenarians must be accepted with a great deal of caution; but, taking them as they appear, there was one aged 101, two 103, and two 105.

CAUSES OF DEATH.

One of the most important sections of vital statistics is that relating to causes of death, and in the following pages deaths from the principal diseases in New South Wales are discussed in detail.

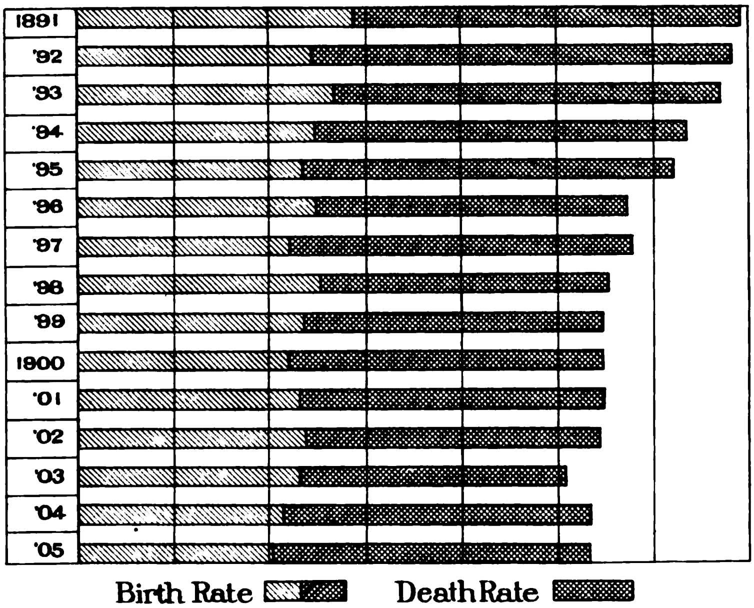
The number of deaths in New South Wales from each cause during 1905, is given in the following table:—

Causes of Death.	Males.	Females.	Persons.
GENERAL DISEASES.			
Measles	14	15	29
Scarlet Fever	9	12	21
Plague	17	3	20
Influenza	99	84	183
Whooping-cough	3	2	5
Mumps	...	1	1
Diphtheria	50	52	102
Cerebro-spinal Fever	15	8	23
Pyrexia	1	1	2
Enteric Fever	150	89	239
Cholera, Cholera Infantum	8	10	18
Ptomaine Poisoning	3	3	6
Diarrhœa	154	89	243
Dysentery	60	47	107
Tetanus	22	3	25
Malaria	10	3	13
Anthrax, Splenic Fever	1	2	3
Syphilis	38	21	59
Gonorrhœa	4	...	4
Puerperal Septicæmia, Septic Intoxication	...	83	83
„ (Illegal Operations)	...	13	13
Puerperal Pyæmia	...	5	5
Phlegmasia Alba Dolens	...	2	2
Puerperal Fever (not otherwise defined)	...	3	3
Pneumonia—Lobar	103	44	147
„ Broncho-	126	110	236
„ Not defined	321	198	519
Erysipelas	12	17	29
Septicæmia, Septic Intoxication (not Puerperal)	15	13	28
Pyæmia (not Puerperal)	6	5	11
Phlegmon, Carbuncle	11	5	16
Phagedæna	1	...	1
Leprosy	2	...	2
Other Infective Conditions	...	2	2
Pulmonary Tuberculosis (Tuberculous Phthisis)	357	265	622
Phthisis (not otherwise defined)	281	134	415
GENERAL DISEASES—*continued.*			
General Tuberculosis	7	14	21
Tuberculous Meningitis	47	46	93
Tuberculous Peritonitis	13	17	30
Tabes Mesenterica	16	7	23
Lupus	1	...	1
Tubercle of other Organs	31	16	47
Hydatids	31	13	44
Other Parasitic Diseases	3	2	5
Starvation, Privation	18	1	19
Scurvy	1	2	3
Alcoholism, Delirium Tremens	64	18	82
Surfeit (Over-eating)	...	1	1
Opium, Morphia Habit	5	1	6
Lead Poisoning	4	...	4
Rheumatic Fever, Acute Rheumatism	28	37	65
Rheumatism of Heart	...	1	1
Chronic Rheumatism	18	19	37
Rheumatic Arthritis, Rheumatic Gout	3	7	10
Gout	2	...	2
Carcinoma	159	197	356
Sarcoma	21	17	38
Cancer, Malignant Disease (not otherwise defined)	345	226	571
Rickets	1	3	4
Purpura	6	6	12
Hæmophilia, Hæmorrhagic Diathesis	3	4	7
Anæmia, Leucocythæmia	26	38	64
Diabetes Mellitus	46	44	90
Premature Birth	393	307	700
Congenital Defects	77	51	128
Injury at Birth	24	30	54
Atelectasis	31	22	53
Malnutrition	26	23	49
Teething	46	35	81

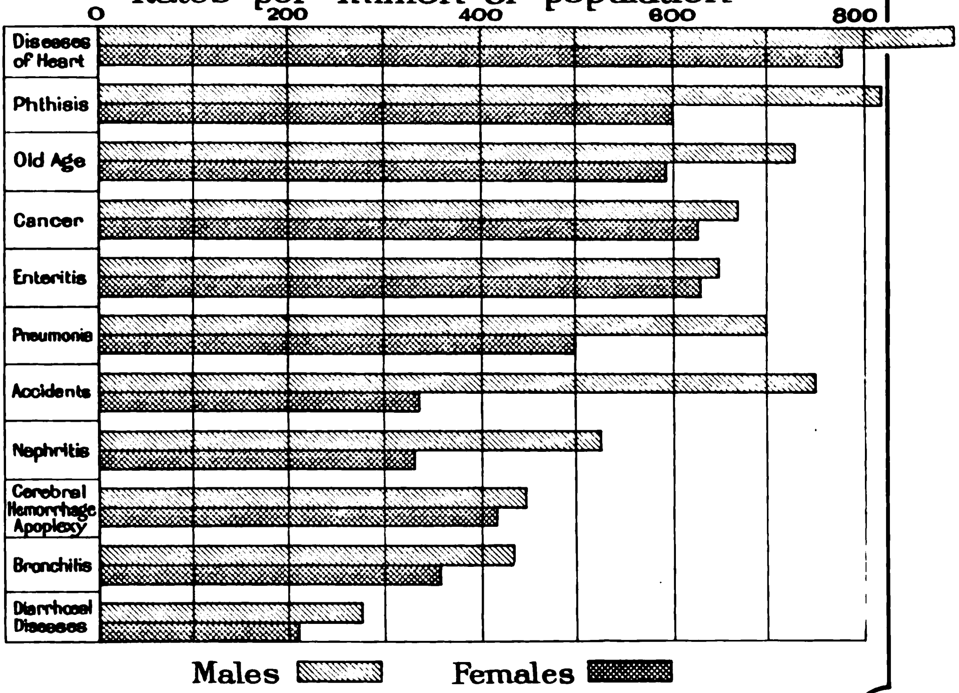
Causes of Death.	Males.	Females.	Persons.
LOCAL DISEASES.			
Diseases of Nervous System.			
Meningitis, Inflammation of Brain	63	48	111
Softening of Brain	21	15	36
General Paralysis of Insane	68	11	79
Insanity	53	43	96
Chorea	2	5	7
Epilepsy	42	29	71
Convulsions	121	95	216
Laryngismus Stridulus	3	4	7
Locomotor Ataxy	15	3	18
Paraplegia, Diseases of Cord	21	10	31
Neuritis, Peripheral, Polyneuritis	1	1	2
Brain Tumour	21	11	32
Other Diseases of Nervous System	31	24	55
Diseases of Organs of Special Sense.			
Otitis, Mastoid Disease	5	7	12
Epistaxis, Diseases of Nose	1	...	1
Disease of Heart.			
Valvular Disease, Endocarditis	233	202	435
Pericarditis	13	12	25
Hypertrophy of Heart	3	2	5
Angina Pectoris	25	10	35
Dilatation of Heart	30	17	47
Fatty Degeneration of Heart	23	46	69
Syncope	69	57	126
Heart Disease (so defined)	317	196	513
Diseases of Blood Vessels.			
Cerebral Hæmorrhage, Cerebral Embolism	167	189	356
Apoplexy, Hemiplegia	166	123	289
Aneurism	32	3	35
Senile Gangrene	21	14	35
Embolism, Thrombosis	8	8	16
Phlebitis	18	6	24
Varicose Veins	...	1	1
Other Diseases of Blood Vessels	3	3	6
Diseases of Respiratory Organs.			
Laryngitis	12	8	20
Membranous Laryngitis (not Diphtheritic)	1	...	1
Croup	6	7	13
Other Diseases of Larynx and Trachea	8	5	13
Bronchitis	344	250	594
Emphysema, Asthma	27	15	42
Pleurisy	50	30	80
Congestion of Lungs	44	20	64
Fibroid Disease of Lungs	19	...	19
Other Diseases of Respiratory System	23	11	34
Diseases of Digestive System.			
Tonsilitis, Quinsy	4	9	13
Diseases of Mouth, Pharynx, Œsophagus	8	5	13
Gastric Ulcer	10	22	32
Gastritis	49	65	114
Other Diseases of Stomach	17	11	28
Enteritis	182	153	335
Gastro-enteritis	327	286	613
Appendicitis, Perityphlitis	53	34	87
Hernia	20	12	32
Intestinal Obstruction	52	38	90
Other Diseases of Intestines	8	12	20
Peritonitis	24	34	58
Cirrhosis of Liver	70	30	100
Other Diseases of Liver and Gall-bladder	69	70	139
Other Diseases of Digestive System	9	11	20

Causes of Death.	Males.	Females.	Persons.
LOCAL DISEASES—*continued.*			
Diseases of Lymphatic System and of Ductless Glands.			
Diseases of Spleen	2	2	4
Other Diseases of Lymphatic System	10	1	11
Diseases of Thyroid Body	...	7	7
Diseases of Supra Renal Capsules	8	3	11
Diseases of Urinary System.			
Acute Nephritis, Uræmia	52	40	92
Chronic Bright's Disease, Albuminuria	361	194	555
Calculus	8	3	11
Diseases of Bladder and of Prostate	108	10	118
Other Diseases of Urinary System	34	16	50
Diseases of Generative System.			
Ovarian Tumour	...	10	10
Other Diseases of Ovary	...	6	6
Uterine Tumour	...	9	9
Other Diseases of Uterus and Vagina	...	10	10
Other Diseases of Generative and Mammary Organs	5	11	16
Accidents of Childbirth.			
Abortion, Miscarriage	...	31	31
Puerperal Mania	...	3	3
Puerperal Convulsions	...	30	30
Placenta Prævia, Flooding	...	42	42
Other Accidents of Pregnancy and Childbirth	...	67	67
Diseases of the Joints.			
Caries, Necrosis	10	3	13
Arthritis, Periostitis	6	2	8
Diseases of the Skin.			
Ulcer, Bed-sores	1	9	10
Eczema	9	2	11
Pemphigus	3	1	4
Other Diseases of the Skin	4	1	5
CAUSES ILL-DEFINED OR UNSPECIFIED.			
Atrophy, Debility	227	160	387
Old Age	578	406	984
Dropsy, Ascites, Anasarca	9	7	16
Tumour	2	2	4
Abscess	4	10	14
Hæmorrhage	2	2	4
Sudden Death (cause not ascertained)	...	1	1
Other Ill-defined	25	14	39
Not Specified	23	4	27
VIOLENT DEATHS.			
In Mines and Quarries	56	...	56
Railways and Tramways	44	2	46
Vehicles and Horses	84	12	96
Ships and Boats	6	...	6
Building Operations	6	...	6
Machinery	8	...	8
Gunshot Wounds	32	2	34
Burns and Scalds	48	88	136
Poison	13	7	20
Bite of Snake or Insect	3	2	5
Drowning	100	24	124
Suffocation	11	9	20
Falls	36	13	49
Weather Agencies	71	65	136
Otherwise and Undefined	68	13	81
Not Classed (Open Verdict)	42	9	51
Homicide	17	4	21
Suicide	132	38	170
Total	8,709	6,269	14,978

BIRTH AND DEATH RATES
Per thousand of population



PRINCIPAL CAUSES OF DEATH 1905
Rates per million of population



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From the foregoing it will be seen that during 1905 the number of deaths from phthisis was greater than from any other disease, the next in order of fatality being old age, cancer, enteritis, and pneumonia.

In the following table will be found the principal causes of death arranged in order of fatality, together with the average number of deaths from similar causes during the previous five years, due allowance having been made for the increase in population. :—

Causes of Death.	Number, 1905.	Average Number, 1900–04.	Causes of Death.	Number, 1905.	Average Number, 1900–04.
Phthisis	1,058	1,234	Convulsions	216	305
Old Age	984	1,044	Influenza	183	237
Cancer	965	923	Insanity	175	144
Enteritis and Gastro-enteritis	948	1,209	Suicide	170	166
Pneumonia	902	1,108	Congenital Defects	128	112
Accident	823	940	Diseases of Bladder and Prostate	118	98
Premature Birth	700	594	Diphtheria and Croup	115	147
Nephritis, Chronic and Acute	647	600	Gastritis	114	110
Cerebral Hæmorrhage and Apoplexy	645	592	Meningitis	111	184
Syncope and Heart Disease undefined	639	768	Cirrhosis of Liver	100	99
Bronchitis	594	607	Tuberculous Meningitis	93	106
Valvular Disease, Endocarditis	435	367	Intestinal Obstruction	90	105
Atrophy, Debility	387	580	Diabetes Mellitus	90	121
Diarrhœal Diseases	368	578	Appendicitis	87	72
Childbirth	279	280	Intemperance	82	78
Enteric Fever	239	357	Teething	81	88
			Pleurisy	80	106
			Others	2,332	2,788
			All Causes	14,978	16,847

Of the six most numerous causes the only one to exhibit an increase was cancer, which unfortunately does not respond to treatment, and the death-roll for which must naturally increase. Bright's disease is also proving more prevalent each year, both as regards numbers and proportion to the population. Of other important causes, cerebral hæmorrhage and endocarditis showed increases.

As regards diseases ordinarily fatal to infants, there were decreases in enteritis, atrophy, diarrhœa, convulsions, and tuberculous meningitis, and an increase in premature birth,

In the succeeding tables the changes in the most important diseases are dealt with separately.

MEASLES.

Measles was the cause during 1905 of 29 deaths, equal to a rate of ·20 per 10,000 living. The rate for males was ·18, and for females ·22, the female rate being slightly the higher, which is the usual experience. The following statement shows the deaths from measles and the rate per 10,000 living, for each sex, arranged in quinquennial periods since 1884 :—

Period.	Males.		Females.		Persons.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884–88	166	·63	165	·76	331	·69
1889–93	393	1·28	369	1·41	762	1·34
1894–98	338	1·00	324	1·09	662	1·04
1899–1903	160	·44	219	·67	379	·55
1904	12	·16	9	·13	21	·15
1905	14	·18	15	·22	29	·20

Measles is a disease chiefly affecting children, and is periodically epidemic. The rates would be more accurately stated if the deaths were compared with the children living of like ages. However, taking the table as it stands, it will be seen that the disease during the last two years was about 75 per cent. less fatal than during the preceding five years. The high rates during the second and third periods were due to severe outbreaks in 1893 and 1898.

SCARLET FEVER.

In 1905 the number of deaths from this disease was 21, equivalent to a rate of ·14 per 10,000 of the population, which is less than half the rate during the previous five years. The number of deaths in the metropolis was 14, and in the remainder of the State 7, the equiavlent rates being ·27 and ·07 respectively per 10,000 living in each. Since 1884 the deaths from scarlet fever and the rates for each sex have been as follows:—

Period.	Males.		Females.		Persons.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	287	1·08	342	1·57	629	1·30
1889-93	185	·60	236	·90	421	·74
1894-98	162	·48	218	·73	380	·60
1899-1903 ...	84	·23	114	·35	198	·29
1904.........	22	·29	28	·41	50	·35
1905.........	9	·11	12	·17	21	·14

Over the whole period the deaths from scarlet fever show a steady and most satisfactory decrease in both sexes. Generally the rate for females is higher than for males. Like measles, it is an epidemic disease chiefly affecting children.

WHOOPING-COUGH.

Whooping-cough is another of the diseases which chiefly affect children, and is more fatal to girls than boys. During 1905 the deaths from it numbered only 5, of which 2 were of girls, and 3 of boys. The rate was ·03 per 10,000 living, which is very much below the average rate of the previous five years. The deaths and rates for each sex since 1884 have been as stated below:—

Period.	Males.		Females.		Persons.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	327	1·24	472	2·17	799	1·66
1889-93	495	1·61	666	2·55	1,161	2·04
1894-98	343	1·01	502	1·69	845	1·33
1899-1903 ...	573	1·58	726	2·23	1,299	1·89
1904.........	59	·77	88	1·29	147	1·02
1905.........	3	·04	2	·03	5	·03

Taking the whole period covered by the table, this disease does not show any marked tendency to decline, the rates being kept up more or less by epidemics. All the deaths during 1905 were of children under 5.

DIPHTHERIA AND CROUP.

Diphtheria, with which is included membranous croup, was responsible for 102 deaths in 1905, while croup, so defined, was responsible for 13. The rate for 1905 was ·78 per 10,000 living, which is well below the rate for the previous five years. In the metropolis the number of deaths was 49, and in the remainder of the State 66, corresponding to rates of ·93 and ·69 per 10,000 respectively living in each. Diphtheria and croup are so similar and were so often confused together in early years especially, that the two should be included together in order to arrive at the real diphtheria rate. This has been done, and the following table shows the number of deaths and the rates in five-year periods since 1884 :—

Period.	Males.		Females.		Persons.	
	Deaths.	Rate per 10,000.	Deaths	Rate per 10,000.	Deaths.	Rate per 10,000.
1884–88	1,069	4·04	980	4·51	2,049	4·25
1889–93	1,433	4·65	1,399	5·36	2,832	4·98
1894–98	712	2·10	710	2·39	1,422	2·24
1899–1903	310	·86	299	·92	609	·89
1904	111	1·45	76	1·11	187	1·29
1905	56	·71	59	·85	115	·78

Up to 1893 the rates did not show very much diminution, but it has since declined considerably, and is now less than one-fifth of what it was twenty years ago.

ENTERIC (TYPHOID) FEVER.

The number of deaths from enteric fever during 1905 was 239, equivalent to 1·62 per 10,000 living, which is one-third less than the rate for the previous five years. Seeing that this is essentially a preventable disease, and one readily yielding to sanitary precautions, the rate is still high, notwithstanding the great improvement in the last fifteen years. The number of deaths and rates since 1884 have been as stated below :—

Period.	Males.		Females.		Persons.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884–88	1,356	5·12	1,115	5·13	2,471	5·13
1889–93	959	3·11	714	2·74	1,673	2·94
1894–98	1,107	3·27	731	2·46	1,838	2·89
1899–1903	1,054	2·91	733	2·25	1,787	2·60
1904	139	1·82	110	1·63	249	1·72
1905	150	1·91	89	1·28	239	1·62

The decrease between 1888 and 1893 was very marked, and is to be traced to the influence of the Dairies Supervision Act, which began to operate in 1889. From 1889 to 1903 the rate was very even, and did not decline to any extent. The last two years, however, show a satisfactory decrease.

The next statement gives the rate in the metropolis and in the country districts during the last twelve years, and, contrary to what might have been expected, the rate in the metropolis is seen to be only about two-thirds of that in the remainder of the State. It would appear that the drainage of the country towns is very defective, or that the water supply is less pure than in the metropolis.

Period.	Metropolis.		Country Districts.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1894–98	507	2·26	1,331	3·24
1899–1903	426	1·73	1,361	3·09
1904............	66	1·28	183	1·96
1905............	62	1·18	177	1·85

Most deaths occur in the summer and autumn. In 1905 there were 83 deaths in the summer months, December, January, February, and 102 in the autumn months, March, April, May.

Enteric is a disease of youth and early manhood, and the following table shows, in various age groups, for the year 1905 and for the ten years preceding 1905, the death-rate per 10,000 of each sex :—

Age Group.	Males.		Females.		Persons.	
	1895–1904.	1905.	1895–1904.	1905.	1895–1904.	1905.
Under 5 years ...	1·06	·12	·98	·24	1·02	·18
5— 9 ,, ...	1·17	·97	1·13	·81	1·15	·89
10—14 ,, ...	1·89	·87	2·05	1·04	1·97	·95
15—19 ,, ...	3·80	3·02	4·22	3·38	4·01	3·20
20—24 ,, ...	6·15	2·76	3·73	2·16	4·95	2·46
25—34 ,, ...	5·21	4·31	2·92	1·18	4·13	2·80
35—44 ,, ...	3·31	2·35	2·38	1·32	2·91	1·91
45—54 ,, ...	2·15	1·52	1·58	1·06	1·91	1·33
55—64 ,, ...	1·41	·24	1·40	...	1·41	·14
65 years and over...	·96	·32	·43	·45	·74	·37
All Ages ...	2·96	1·91	2·27	1·28	2·64	1·62

Among males, during the first ten years of life there is not much variation in the rate. After that, it rises fairly rapidly to a maximum at ages 20 to 24, and then gradually declines with advancing age. With females, the experience is similar, except that the maximum point is reached at ages 15 to 19, five years earlier than with males. At ages 10 to 19 the rates for females are slightly higher than for males, but at all other ages the rates for males are higher. In 1905, among both sexes, the rates at all ages showed a decrease as compared with the previous ten years.

The average number of cases notified to the Board of Health of scarlet fever, diphtheria, and enteric fever per 10,000 of the population living in the metropolitan district, during the years 1898 to 1905, as well as the death-rates and the fatalities per 100 cases, were as follows :—

Diseases.	Notified Cases.		Deaths.		Fatality per cent. (= Deaths per 100 cases).
	Number.	Rate per 10,000 of Population.	Number.	Rate per 10,000 of Population.	
Scarlet-fever	10,975	27·6	176	0·4	1·6
Diphtheria	4,130	10·4	359	0·9	8·7
Enteric Fever	6,092	15·3	629	1·6	10·3

It is interesting to compare this result with the experience of London, where the fatality from scarlet-fever is 3·9 per cent. of notified cases, from diphtheria 18·8 per cent., and from enteric 17·0 per cent. All these diseases are more virulent in their effects in London, in each case being about twice as fatal as in Sydney.

DIARRHŒAL DISEASES AND ENTERITIS.

Diarrhœal diseases comprise cholera, diarrhœa, and dysentery, and in 1905 were responsible for 368 deaths, or at the rate of 2·49 per 10,000 living. Enteritis caused 948 deaths, or 6·41 per 10,000. Of the total deaths from these causes, 531, or 40 per cent., occurred in the three summer months, January, February, and December, which were unusually cool, and 469, or 36 per cent., in the autumn, March, April, May. As a rule, over 50 per cent. of the deaths occur in the summer. These diseases are considered together because, in former years, before diseases were diagonised as carefully as now, deaths were ascribed to diarrhœa which are now attributed to enteritis or gastro-enteritis. The following table gives the deaths and rates of each group and of the two together since 1884; and it will be seen that while the rate from the first has been declining, that from the second has been increasing:—

Period.	Diarrhœal Diseases.		Enteritis.		Diarrhœal Diseases and Enteritis.	
	No. of Deaths.	Death rate per 10,000 Living.	No. of Deaths.	Death rate per 10,000 Living.	No. of Deaths.	Death rate per 10,000 Living.
MALES.						
1884–88	2,464	9·31	1,293	4·89	3,757	14·20
1889–93	2,197	7·13	1,630	5·29	3,827	12·42
1894–98	2,117	6·25	2,176	6·43	4,293	12·68
1899–1903	1,615	4·46	2,970	8·20	4,585	12·66
1904	230	3·01	480	6·29	710	9·30
1905	222	2·83	509	6·49	731	9·32
FEMALES.						
1884–88	2,160	9·94	1,081	4·97	3,241	14·91
1889–93	1,776	6·81	1,340	5·13	3,116	11·94
1894–98	1,910	6·44	1,886	6·36	3,796	12·80
1899–1903	1,302	4·00	2,694	8·28	3,996	12·28
1904	156	2·28	482	7·06	638	9·34
1905	146	2·10	439	6·32	585	8·42
PERSONS.						
1884–88	4,624	9·59	2,374	4·92	6,998	14·51
1889–93	3,973	6·98	2,970	5·22	6,943	12·20
1894–98	4,027	6·34	4,062	6·40	8,089	12·74
1899–1903	2,917	4·24	5,664	8·24	8,581	12·48
1904	386	2·67	962	6·65	1,348	9·32
1905	368	2·49	948	6·41	1,316	8·90

Considering the combined diseases, it will be seen that there was a drop in the rate from 1888 to 1893, probably due to the influence of the Dairies Supervision Act; for the next ten years it was constant, then there was a further large decrease in 1904 and 1905, when the rate was 25 per cent. below that of the preceding five years. The rate is practically the same for both sexes.

These diseases chiefly affect children and old people. Of the total deaths in 1905, 1,054, or 80 per cent., were of children under 5 years of age, and 174, or 13 per cent., were of persons over 60.

PNEUMONIA.

The total deaths referred to pneumonia were 902, equal to a rate of 6·10 per 10,000 living; of these, 236 were ascribed to broncho-pneumonia, 147 to lobar pneumonia, while 519 were not further defined. Among males the rate was 7·02, and among females 5·07, per 10,000 living of each sex, respectively. The rate is slightly lower than in 1904, and is also below the average of the last five years. Pneumonia is more fatal to males than to females, as the following table, giving the rates by sexes, since 1884, shows :—

Period.	Males.		Females.		Persons.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	2,032	7·68	1,301	5·98	3,333	6·91
1889-93	2,158	7·00	1,373	5·26	3,531	6·21
1894-98	2,514	7·43	1,528	5·15	4,042	6·37
1899-1903	3,191	8·81	2,000	6·15	5,191	7·55
1904	578	7·57	393	5·75	971	6·17
1905	550	7·02	352	5·07	902	6·10

There has been very little variation in the rate for some years, that in 1905 being practically the same as fifteen years ago. There was a drop in the rate after 1888, but it then steadily increased again to the highest point of the whole period covered by the table, in 1899-1903. Most deaths occur in the cold weather. In 1905 there were 438 deaths, or 48 per cent., in the four months June to September. Pneumonia is most destructive amongst young children and old persons, as will be seen in the table below, which gives the death-rates per 10,000 in various age groups, for 1905 and for the ten years preceding 1905.

Age Group.	Males.		Females.		Persons.	
	1895-1904.	1905.	1895-1904.	1905.	1895-1904.	1905.
Under 5 years	22·63	19·68	18·77	16·64	20·72	18·18
5- 9 ,, ...	1·50	1·19	1·34	1·50	1·42	1·28
10-14 ,, ...	·72	·43	1·13	·35	·92	·39
15-19 ,, ...	2·53	2·52	1·55	1·95	2·02	2·24
20-24 ,, ...	3·65	3·20	1·96	1·30	2·81	2·24
25-34 ,, ...	4·64	4·05	2·92	2·54	3·83	3·32
35-44 ,, ...	6·95	5·61	4·44	3·48	5·88	4·69
45-54 ,, ...	10·54	11·84	5·55	4·69	8·46	8·86
55-64 ,, ...	18·62	12·71	12·80	9·58	16·17	11·38
65 years and over...	35·95	27·99	29·46	30·69	33·25	29·10
All Ages.........	8·30	7·02	5·82	5·07	7·13	6·10

Both amongst males and females the rate is higher during the first five years of life than at any subsequent age up to 65. The rate is at a minimum at ages 10 to 14, after which it increases with increasing age—gradually up to age 35, and then very rapidly. At all ages, except 10 to 14, this disease is more fatal to males than females. During 1905 the rates, as compared with those for the preceding ten years, show decreases at all ages of males. Among females there were increases in those aged 5 to 9, 15 to 19, and 65 and over.

PHTHISIS.

Phthisis, or pulmonary tuberculosis, with 1,058 victims, or 7 per cent. of the total, caused more deaths during the year than any other disease. This is equivalent to 7·16 per 10,000 living, the rate amongst males being 8·23 and amongst females 5·95 per 10,000. In both cases the rate, especially for females, showed an improvement, and was lower than ever before.

The table below shows the deaths from this disease and the rates for each sex since 1884 :—

Period.	Males.		Females.		Persons.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884–88	3,132	11·83	2,022	9·30	5,154	10·69
1889–93	3,269	10·61	1,925	7·38	5,194	9·13
1894–98	3,233	9·55	2,020	6·81	5,253	8·27
1899-1903	3,388	9·35	2,355	7·24	5,743	8·35
1904	677	8·87	518	7·59	1,195	8·26
1905	645	8·23	413	5·95	1,058	7·16

It will be observed that during the whole period of the table the rate declined amongst males, but after declining amongst females down to 1898 it then showed an upward tendency. In 1905, however, there was a marked decrease. The decrease in the number of deaths from phthisis and other forms of tuberculosis has taken place since the passing of the Dairies Supervision Act of 1886, the Diseased Animals and Meat Act of 1892, and the Public Health Act of 1896, and may be attributed to their operation. The Board of Health is empowered by these Acts to supervise dairies and the production of milk, cream, butter, and cheese, and to prevent the sale of tuberculous meat.

The ages of the persons who died ranged from 6 months to 85 years, and of the total, 640, or 60 per cent., were aged from 20 to 44, the most effective ages of the whole lifetime. The following statement gives the death rates per 10,000 from phthisis for both sexes at various age groups, for 1905 and for the ten years preceding 1905 :—

Age Group.	Males.		Females.		Persons.	
	1895–1904.	1905.	1895-1904.	1905.	1895-1904.	1905.
Under 5 years	1·51	·95	1·16	1·10	1·34	1·03
5— 9 „	·32	·22	·49	·12	·41	·17
10—14 „	·51	·54	1·20	·81	·85	·67
15—19 „	3·38	3·27	5·23	5·20	4·30	4·22
20—24 „	9·92	9·15	9·38	8·64	9·68	8·89
25—34 „	14·28	14·36	13·18	10·23	13·76	12·37
35—44 „	17·45	13·03	14·02	10·80	15·98	12·07
45—54 „	18·66	14·73	11·10	10·65	15·51	13·03
55—64 „	20·86	19·79	11·51	7·93	16·92	14·75
65 and over	15·13	15·58	7·24	8·57	11·85	12·69
All Ages............	9·28	8·23	7.00	5·95	8·21	7·16

The rate is higher during the first five years than during the next ten. It is at a minimum at ages 5 to 14, and then rises rapidly up to about age 60, after which it declines, the reason being probably not that the disease is less fatal after that age, but that the majority of people afflicted have succumbed before reaching it. Up to age 20 the female rate is higher, but over 20 the disease is more fatal to males, the difference in favour of females increasing with increasing age. In 1905 the rates among both males and females showed decreases at practically all ages, but most at the later ages.

If the deaths be distinguished in the two divisions of the metropolis and the country districts, as in the following table, it will be seen that the rate in the former is over 42 per cent. higher than in the latter :—

Period.	Metropolis.		Country Districts.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1894–98	2,353	10·48	2,900	7·06
1899-1903	2,550	10·34	3,193	7·24
1904	523	10·16	672	7·21
1905	445	8·49	613	6·42

The Australian climate is certainly favourable to those who suffer from pulmonary diseases, and a large number of persons suffering from phthisis visit Australia in search of relief. Many of these are in the last stages of the disease, and succumb after a short residence in the State. The experience of the last ten years show that 5 per cent. of the fatal cases of phthisis were those of persons whose residence in Australia had not exceeded five years, and 2 per cent. of those who had been resident less than one year. The figures for the year 1905 show that out of the 1,058 persons who died from phthisis, 697 were born in Australasia, and of the remainder, 26 had been resident in the Commonwealth less than five years, 80 from five to twenty years, and 227 for more than twenty years ; in 28 instances neither birthplace nor length of residence was stated.

Of the total persons dying from this disease 512, or 48 per cent., comprising 281 males and 231 females, were married, the families born to some of them being rather large. The experience of the last ten years shows that the average number of children to married males who died from phthisis was 4·03, and to married females 3·93. Nearly 80 per cent. of the issue born to these persons survived them.

Phthisis is the most deadly of all diseases, and the following comparison showing, the rates in the various countries is interesting. The rates, which are mostly based on the experience of the ten years ended 1904, are stated per 1,000 of total population, and thus do not take into account either age or sex, which, as will be seen in the preceding tables, is rather material. If anything, this omission renders the comparison favourable to New South Wales and other Australian States, because here the proportion of aged persons is smaller than in the countries of the old world. It is also possible that there are differences in classification of the causes of death in the various countries :—

Country.	Death-rate per 1,000 of total Population.	Country.	Death-rate per 1,000 of total Population.
Austria	3·47	Victoria	1·19
Ireland	2·14	Ceylon	·88
German Empire	2·07	Queensland	·87
Norway	1·98	South Australia	·87
Scotland	1·62	New South Wales	·82
Netherlands	1·57	New Zealand	·78
Belgium	1·36	Western Australia	·70
England and Wales	1·30	Tasmania	·69
Italy	1·22		

It will be seen that New South Wales stands fourth from the bottom on the above list. The rate in all the European countries is higher than in New South Wales, and the three with lower rates are all Australian States. The experience of these countries, with the exception of Ireland, is similar to that of New South Wales, namely, that the rate is decreasing. In Ireland it is increasing, and in Austria it is practically stationary.

CANCER.

There were 965 deaths from cancer in 1905, equal to a rate of 6·53 per 10,000 living, which is the highest rate on record. The deaths during the year were 525 amongst the males and 440 amongst the females, the rates being 6·70 and 6·33 per 10,000 living of each sex respectively.

It would seem that cases of cancer are increasing in New South Wales much faster than might be expected from the actual increase in population. During the last twenty years the rates have doubled, slightly more among males and less among females. It has been stated that the more skilful diagnosis of late years, especially of internal cancer, may account for part of the increase; but how far this is so it is impossible to say, and there seems to be no doubt that the spread of cancer is very real. The following table shows the deaths and rates per 10,000 living for each sex since 1884:—

Period.	Males.		Females.		Deaths.	Rate per 10,000.
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.		
1884–88	859	3·25	732	3·37	1,591	3·30
1889–93	1,262	4·10	1,038	3·98	2,300	4·04
1894–98	1,719	5·09	1,387	4·68	3,106	4·89
1899–1903	2,295	6·34	1,877	5·77	4,172	6·07
1904	457	5·99	497	7·28	954	6·60
1905	525	6·70	440	6·33	965	6·53

The rate has increased steadily during the last twenty years, although in 1905 it declined slightly, as compared with 1904. There was a large increase in the male but a decrease in the female rate; in 1904 the female rate was considerably higher than the male. Generally the male rate is the higher, which is contrary to the experience of the United Kingdom, where the female rate is higher.

The ages of the 965 persons who died ranged from 6 months to 89 years, but 96 per cent. were aged 35 and over. The table below shows, for 1905 and the ten years 1895–1904, for each sex, the death-rate per 10,000 in age groups after 35:—

Age Group.	Males.		Females.		Persons.	
	1895–1904.	1905.	1895–1904.	1905.	1895–1904.	1905.
Under 35 years	·39	·28	·42	·45	·40	·36
35—44 "	3·95	3·62	6·93	7·32	5·22	5·21
45—54 "	12·25	14·27	19·32	21·51	15·30	17·29
55—64 "	33·76	35·68	38·11	39·63	34·75	37·36
65—79 "	61·89	75·41	57·89	63·01	60·24	70·35
80 and over	73·90	52·29	64·46	45·45	69·57	49·12
All Ages	5·84	6·70	5·60	6·35	5·73	6·53

Cancer is essentially a disease of old age. Prior to age 35 very few succumb but after that the rate increases rapidly as the age advances. At ages up to 64 the female rate is the higher, but over that age the male rate is much the greater. Among males during 1906 there was a decrease in the rates at those ages except from 45 to 79, as compared with the previous ten years, and among the females there were increases at all ages from 35 to 79.

Of the 965 persons dying in 1905, 778—396 males and 382 females—were married, and of these 698 left families. From the experience of the last ten years it is found that the average family of married males who died of cancer was 6·04 children, and of married females 5·68 children, of whom about 80 per cent. survived their parents.

Included under the heading cancer are the deaths due to other malignant diseases: Carcinoma to the number of 356; epithelioma, 23; sarcoma, 38; malignant tumour, 8; rodent ulcer, 11; scirrhus, 11; and others described as malignant disease, 169; leaving 349 which were described as cancer.

The principal parts of the body affected by cancer and malignant diseases appear to be the stomach, liver, and intestines amongst males, and the uterus, stomach, liver, and breast amongst females. The following table showing the principal parts affected in various ages in each 10,000 deaths is based on the experience of the last five years. In several instances more than one part was affected at the same time:—

Part affected.	AGE GROUP.						
	Under 35.	35–44.	45–54.	55–64.	65–79.	80 & over.	All Ages.
MALES.							
Head and Neck	32	37	102	126	220	28	545
Face and Jaw	20	82	126	232	362	65	887
Mouth and Throat	8	77	150	212	387	61	895
Tongue	8	37	57	175	187	24	488
Intestines	53	130	171	317	456	33	1,160
Liver	90	106	260	394	545	29	1,424
Kidney	37	12	61	110	171	20	411
Stomach	28	264	594	1,021	1,241	70	3,218
Others, and not stated	163	109	119	245	284	52	972
	439	854	1,640	2,832	3,853	382	10,000
FEMALES.							
Head and Neck	14	14	19	34	43	9	133
Face and Jaw	14	19	24	71	90	57	275
Mouth and Throat	5	9	28	33	38	5	118
Breast	29	247	304	365	332	76	1,353
Intestines	52	176	276	370	427	33	1,334
Liver	71	95	247	413	551	66	1,443
Kidney	33	5	19	38	52	...	147
Stomach	52	142	328	532	683	62	1,799
Uterus	119	446	702	493	451	38	2,249
Ovary	43	33	38	62	9	5	190
Others, and not stated	109	129	203	285	209	24	959
	541	1,315	2,188	2,696	2,885	375	10,000

It will be seen that cancer has an overwhelming tendency to invade the mammary and generative organs of females, the proportion of cases occurring in those parts being no less than 38 per cent. at all ages. The head, face, and neck, which are largely attacked among males, escape comparatively lightly among females.

Cancer is probably the most feared of all diseases, and in all countries for which there are records the death-rate is on the increase. In the following table the rates based on the whole population are given for certain countries. As previously explained, the comparison is somewhat rough, and is probably, if anything, favourable to the Australian States. The rates represent the experience of the ten years ended 1904 :—

Country.	Death-rate per 1,000 of Population.	Country.	Death-rate per 1,000 of Population.
Switzerland	1·27	Ireland	·60
Netherlands	·92	South Australia	·58
Norway	·85	Ceylon	·56
England and Wales	·81	New South Wales	·55
Scotland	·77	Tasmania	·55
German Empire	·71	Italy	·52
Victoria	·70	Queensland	·47
Austria	·68	Western Australia	·35
New Zealand	·62		

Compared with these countries, there are only three with rates lower than New South Wales, and one equal to it.

INSANITY.

Insanity is classed as a disease of the nervous system, and the total number of deaths of insane persons in 1905 was 431, equal to 2·91 per 10,000 persons living, but only 175 deaths appear in the tables as due to insanity (includgeneral paralysis of the insane), the remaining deaths being attributed to their immediate cause.

The death-rate of persons dying from insanity, including general paralysis of the insane, per 10,000 living, was 1·54 in the case of males, and ·78 in the case of females.

Practically all the insane persons in New South Wales are under treatment in the various Hospitals for the Insane. At the end of 1905 there were 5,277 persons under official control and receiving treatment. This is equal to 3·57 insane persons per 1,000 of population. The average number during the preceding five years was 3·38.

The percentage of deaths of insane persons in New South Wales is comparatively light. The following table has been computed on the basis of the average number of patients resident in Hospitals for the Insane :—

Period.	Males.		Females.		Persons.	
	Deaths in Hospitals for Insane.	Proportion of average number resident.	Deaths in Hospitals for Insane.	Proportion of average number resident.	Deaths in Hospitals for Insane.	Proportion of average number resident.
		per cent.		per cent.		per cent.
1894–98	782	6·86	366	5·18	1,148	6·21
1899–1903	1,021	7·77	465	5·54	1,486	6·91
1904	243	8·35	127	6·69	370	7·70
1905	222	7·40	120	6·11	342	6·89

Insanity is rarely fatal before the age of puberty, and the death-rate is greater amongst males than females. The death-rate of males over 25 was 7·11, and of females 4·88 per 10,000 living in each age group.

There were 198 married persons amongst the insane, viz., 113 males and 85 females, and of these, 93 males and 71 females had issue. Taking the experience of the last ten years as a guide, the average number in a family of the married insane is 4·45. The ages of the insane who died during 1905 ranged up to 90 years; 87 persons, or about one-fifth of the whole, being upwards of 70 years. It is evident, therefore, that insanity is not necessarily a hindrance to longevity.

DISEASES OF THE HEART.*

Diseases of the heart were the cause of 1,255 deaths, equivalent to a rate of 8·49 per 10,000 living. Of the total, 713 were males and 542 females, the rate being 9·09 and 7·80 per 10,000 living respectively. The deaths and death-rates for each sex since 1884 are shown below:—

Period.	Males.		Females.		Persons.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884–88	2,223	8·40	1,451	6·67	3,674	7·62
1889–93	2,522	8·19	1,564	5·99	4,086	7·18
1894–98	2,880	8·51	1,758	5·93	4,638	7·30
1899–1903	3,543	9·78	2,418	7·43	5,961	8·67
1904	733	9·60	520	7·61	1,253	8·66
1905	713	9·09	542	7·80	1,255	8·49

This table shows that heart disease, on the whole, is on the increase, although it may be that part of the increase is due to a better acquaintance with the action of the heart, and that many deaths which were formerly attributed to old age are now referred to some form of heart disease. The group, however, is not a very satisfactory one, seeing that included in it are not only the definite affections, but the very indefinite causes, syncope, and heart disease not otherwise defined. These two together accounted for 639 deaths, or 51 per cent. of the whole. After these came endocarditis with 435 deaths.

The death-rate for males is higher than for females, probably due to the greater risks and shocks to which males are exposed. Among both sexes there was a large increase in the rate during the five years after 1898. In 1905 there was a decrease in the males and a slight increase in the females.

The ages of the persons who died ranged from under 1 year (at which age there were three) to 96 years; but, as might be expected, the great majority of deaths occurred after middle age had been passed, 964 of the deaths being of persons over 45 years of age. The following table shows the rates per 10,000 for males and females at various age groups, for 1905 and for the ten years preceding 1905:—

Age Group.	Males.		Females.		Persons.	
	1895-1904.	1905.	1895-1904.	1905.	1895-1904.	1905.
Under 25 years......	1·66	1·01	1·70	1·42	1·68	1·21
25—34 years	2·77	2·28	3·14	2·99	2·94	2·62
35—44 ,, ...	6·39	6·51	6·71	7·20	6·52	6·81
45—54 ,, ...	16·41	14·58	13·99	14·91	15·40	14·71
55—64 ,, ...	41·82	39·10	32·43	33·36	37·87	36·65
65 and over	100·30	100·51	80·28	99·73	91·97	100·14
All Ages.........	9·34	9·09	6·89	7·80	8·19	8·98

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* Includes endocarditis, pericarditis, hypertrophy, angina pectoris, dilatation, fatty degeneration, syncope, and heart disease so defined.

At ages up to 44 the rate is below that for the whole population, but after that age it increases rapidly until at ages over 64 about 1 per cent. die annually from diseases of the heart. At ages under 45 females are a little more subject to heart disease than males, but at the subsequent ages the male rate is much the higher. In 1905 the male rates declined, but the female rates for ages over 34 showed increases as compared with the average rates of the preceding ten years.

APOPLEXY.

To cerebral hæmorrhage, cerebral embolism, apoplexy, and hemiplegia, there were due 645 deaths, of which 353 were males and 292 females. The rate is 4·36 per 10,000 living, 4·50 for males and 4·20 for females. In both sexes the rate is much above the average. The following table shows the rates for these diseases for each sex in quinquennial periods since 1884 :—

Period.	Males.		Females.		Persons.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884–88	1,407	5·32	758	3·49	2,165	4·49
1889–93	1,298	4·21	963	3·69	2,261	3·97
1894–98	1,369	4·04	1,005	3·39	2,374	3·74
1899–1903	1,565	4·32	1,175	3·61	2,740	3·98
1904	304	3·98	247	3·62	551	3·81
1905	353	4·50	292	4·20	645	4·36

From this it is seen that while deaths from these diseases have decreased among males, they have remained fairly stationary amongst females during the last ten years. It is more than likely, however, that the decrease is not so great as it appears, because, owing to improved diagnosis, deaths attributed to apoplexy are now put down to some more definite disease of other organs, of which apoplexy is only a symptom. The male rate is a little higher than the female. For the years prior to 1894 the figures for cerebral embolism are not included. The rates for those years, therefore, should be a little higher than are shown.

DISEASES OF DIGESTIVE SYSTEM.

The deaths referred to these diseases numbered 1,694, equivalent to 11·46 per 10,000 living, the rates for males and females being 11·51 and 11·40, as compared with 13·85 and 10·36 respectively, the rates during the preceding five years, By far the most deaths in this system were ascribed to enteritis, which has already been discussed. Other principal causes were those which follow, namely, gastritis, with 114 deaths, or 0·77 per 10,000 living, and gastric ulcer with 32, both of which were more fatal to females than males; appendicitis, with 87 deaths, or 0·59 per 10,000, which was more fatal to males, the most dangerous period being between the ages of 10 and 30; cirrhosis and other diseases of the liver, with 239 deaths, or 1·62 per 10,000 living—the majority of which was due to cirrhosis, which is much more prevalent among males than females, and is of interest in connection with the subject of intemperance; and peritonitis, without further description, which caused 58 deaths, equivalent to 0·39 per 10,000 living.

BRIGHT'S DISEASE.

Of the 826 deaths due to diseases of the urinary system, 555 were caused by Bright's disease, and 92 by acute nephritis. Taking these two diseases together, the rate was 4·38 per 10,000 living, for males 5·27, and for females 3·37. In 1905 the rate was slightly lower than in 1904, but was above the quinquennial average. The changes in the rates of these two diseases, acute and chronic nephritis, will be seen below :—

Period.	Males.		Females.		Persons.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884–88	626	2·37	386	1·78	1,012	2·10
1889–93	907	2·94	570	2·18	1,477	2·60
1894–98	1,291	3·81	821	2·77	2,112	3·33
1899–1903	1,659	4·58	996	3·06	2,655	3·86
1904	422	5·53	236	3·46	658	4·55
1905	413	5·27	234	3·37	647	4·38

During the whole period covered by the table the rate both for males and females has practically doubled. The male rate is about half as high again as for females. Not many persons under 35 die from nephritis, the rates for 1905 being: under 35, 1·15, and over 35, 12·21 per 10,000 living in each group respectively.

DEATHS IN CHILD-BIRTH.

The number of deaths of women in 1905 from the diseases of child-bed was 279, corresponding to a rate of 7 per 1,000 births. Of these, 106 were diseases of parturition, 106 were due to puerperal septicæmia, &c., and 67 to other casualties of child-birth. Taking one year with another, the deaths resulting from various diseases and casualties incident to child-birth average about 7 per 1,000 births, or 1 death to every 143 births. During the thirteen years ended 1905, the deaths from various assigned causes were as follows :—

Cause of Death.	1893–1896.	1897–1900.	1901–1904.	1905.	1893–1905.	
					Total Deaths.	Proportion due to each cause.
						per cent.
Abortion	39	80	54	44	549	15·80
Miscarriage	93	117	122			
Puerperal Fever	369	362	378	91	1,200	34·53
Puerperal Mania	13	9	10	3	35	1·01
Puerperal Convulsions	100	126	113	30	369	10·62
Placenta Prævia, Flooding	142	159	135	42	478	13·76
Phlegmasia Dolens	7	7	1	2	17	·48
Other Casualties of Child-birth	252	263	245	67	827	23·80
	1,015	1,123	1,058	279	3,475	100·00

During the thirteen years, 1893-1905, of the 3,475 women who died from diseases of child-birth, 3,117 were married, and 358 single, and as there were during this period 453,262 legitimate and 33,124 illegitimate births—reckoning cases of twins and triplets as single births—it follows that amongst married women the fatal cases average 6·9 per 1,000 births, or 1 in 145, and amongst single women 10·8 per 1,000, or 1 in 93.

The following table shows the deaths in child-birth of married women during the thirteen years 1893–1905, arranged according to the previous issue of the deceased mothers, exclusive of children still-born, no information with respect to these being shown in the death registers :—

Previous Issue.	Number of Confinements.	Deaths in Child-birth.	Previous Issue.	Number of Confinements.	Deaths in Child-birth.
0	98,531	810	13	988	10
1	79,173	358	14	488	7
2	64,115	349	15	210	2
3	51,750	292	16	93	1
4	41,385	287	17	32	2
5	33,069	225	18	14	...
6	26,263	195	19	7	...
7	20,245	178	20	2	...
8	14,610	160	21	1	...
9	10,027	93	22	3	...
10	6,499	63	Not stated	1	2
11	3,764	48			
12	1,992	35	Total	453,262	3,117

The statement below shows the death-rate of each class up to the thirteenth, after which the numbers are too small to deduce averages :—

Previous Issue.	Deaths in Child-birth per 1,000 Confinements.	Number of Confinements per Death in Child-birth.	Previous Issue.	Deaths in Child-birth per 1,000 Confinements.	Number of Confinements per Death in Child-birth.
0	8·2	122	7	8·8	114
1	4·5	221	8	11·0	91
2	5·4	184	9	9·3	108
3	5·6	177	10	9·7	103
4	6·9	144	11	12·8	78
5	6·8	147	12	17·6	57
6	7·4	135	All Confinements	6·9	145

According to this statement the risk of death at the first confinement is higher than at any subsequent one up to the eighth. It is least at the second, but not much higher at the third. A most important consideration, therefore, so far as the risk of child-birth is concerned, is the number, if any, of the woman's previous issue.

VIOLENCE.

During the year 1,065 persons met with violent deaths. This corresponds to 7·11 per cent. of the total deaths, and is equal to a rate of 7·20 per 10,000 living, which is considerably below the mean rate for the previous five years. The mortality rate from violence amongst males is about two and a half times greater than for females, for of the 1,065 deaths of this kind, 777, equal to 9·91 per 10,000 living, were of males, and 288, equal to 4·15 per 10,000, were of females.

Accident or Negligence.

The number of fatal accidents during the year was 823, viz., 586 of males and 237 of females, equal to rates of 7·47 and 3·41 per 10,000 living of each sex. Accidental deaths have always been very numerous, especially in the country. Of the total number registered during 1905, 186 occurred in the metropolis and 637 in the country districts. As a rule about three-fourths of the accidents occur in the country, which contains about two-thirds of the total population.

The number of deaths and the rates since 1884 are shown in the table below:—

Period.	Males.		Females.		Persons.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884–88	3,550	13·41	944	4·34	4,494	9·32
1889–93	3,666	11·90	966	3·70	4,632	8·14
1894–98	3,498	10·33	1,095	3·69	4,593	7·23
1899–1903	3,432	9·47	1,103	3·39	4,535	6·59
1904	545	7·14	202	2·96	747	5·16
1905	586	7·47	237	3·41	823	5·57

It will be seen that, although the accident rate is still high, it has been steadily decreasing. Among males the fall has been more rapid than amongst females. In 1905 there was an increase among both males and females as compared with 1904, but a decrease as compared with the preceding five years. For the years prior to 1894 the rates are really slightly lower than are shown in the table, because certain causes formerly classed as accidents are now recorded elsewhere.

Experience shows that out of every 1,000 accidents 171 are due to drowning, 165 to burns or scalds, 114 to vehicles and horses, 75 to weather agencies, 68 to mines and quarries, 68 to railways and tramways, and 63 to falls. Among males the greater number are due to drowning, and among females to burns or scalds.

Suicide.

The number of people who took their own lives during 1905 was 170, equal to a rate of 1·15 per 10,000 living. The number of males was 132, equal to a rate of 1·68 per 10,000 living, and of females 38, equal to 0·55 per 10,000, so that the rate for males is three times as great as that of the females. During 1905 the male rate decreased, but the female rate increased.

Suicide is steadily increasing, as will be seen in the table below, which shows the number of deaths and the rate for each sex since 1884:—

Period.	Males.		Females.		Persons.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884–88	428	1·62	96	·44	524	1·09
1889–93	519	1·68	110	·42	629	1·11
1894–98	679	2·01	169	·57	848	1·34
1899–1903	651	1·80	142	·44	793	1·16
1904	156	2·04	29	·42	185	1·28
1905	132	1·68	38	·55	170	1·15

The rate for females has remained practically constant during the last twenty years, so that not only has the general rate increased, but the proportion of male to female suicides has increased.

The means usually adopted by men for self-destruction are shooting, poisoning, drowning, stabbing, and hanging. Out of every 100 cases, 30 are by shooting, 18 by poisoning, 16 by drowning, 16 by stabbing, and 16 by hanging. Shooting has always been a favourite mode of taking life, and of recent years drowning has been much resorted to. Amongst women, weapons are avoided, and poison has been the means most often resorted to, the poisons selected being those which cause the maximum of pain, such as strychnine, arsenic, and phosphorus, in the shape of vermin-killer or match-heads. In cases of suicide by poison, the kinds most generally used are strychnine, arsenic, phosphorus, carbolic acid, potassium cyanide, and prussic acid in the order named.

The ages of suicides in 1905 ranged between 12, in the case of a girl, to 84, in the case of a man ; and 100, or 58·8 of the total, were between the ages of 25 and 55. The following table shows the rates, in age groups, for males and females for 1905, and for the years preceding 1905 :—

Age Group.	Males.		Females.		Persons.	
	1895–1904.	1905.	1895–1904.	1905.	1895–1904.	1905.
Under 25 years......	·27	·22	·24	·40	·25	·31
25—34 „	2·06	2·03	·55	·81	1·35	1·44
35—44 „	3·68	1·90	·99	·60	2·53	1·34
45—54 „	4·64	5·62	·92	·85	3·09	3·63
55—64 „	6·57	4·64	1·18	...	4·30	2·67
65 and over	6·31	6·10	·65	1·81	4·25	4·85
All Ages	1·93	1·68	·47	0·55	1·25	1·15

At ages under 25 suicide is not common, but after that age, especially with males, the tendency increases with increasing age. With females, the desire to take their own lives is apparently lessened after the age of 65. During 1905 there was an increase in the rate for males aged 45 to 54, and for females aged 25 to 34, and 65 and over.

Of the suicides during 1905, 86, or 51 per cent., were natives of Australasia, while 61 (54 per cent.) of the males, and 24 (63 per cent.) of the females were married. The records of the last ten years show that the average number of children born to married males who took their own lives was 4·73, and to married females 3·88.

Experience shows that conduct is largely influenced by the seasons. As regards suicides, this is most plainly seen amongst males, who are more inclined to attempt self-destruction in the last quarter of the year. January, February, and December, the three hottest months of the year, have the largest record of suicides. For the five years ended 1905 the proportion of male suicides per 1,000 during the first quarter of the year was 251 ; second, 232 ; third, 251 ; and fourth, 266.

Female suicides classified by quarters for the same period show the highest proportion during the second quarter ; but, contrary to expectation, the proportion of the first quarter is the lowest of the year, the figures being as follow :—First quarter, 212 per 1,000 ; second, 274 ; third, 247 ; and fourth, 267

SEASONAL PREVALENCE OF DISEASES.

The statement below shows the principal diseases, the deaths from which vary according to the seasons. The figures are based on the experience of the three years 1903–05, the only ones for which the information is available, and represent the proportion of deaths in each month per 1,000 deaths during the year from each cause. The actual returns were adjusted on account of the unequal number of days in the various months, and the proportions quoted in the table are on the basis of all the months being of equal length.

Month.	Influenza.	Enteric Fever.	Diarrhœal Diseases.	Enteritis.	Pneumonia.	Bronchitis.	Phthisis.
January	46	139	207	172	54	46	82
February	20	142	157	125	49	42	74
March	14	169	123	110	53	42	76
April	30	133	115	113	59	58	83
May	41	124	75	76	73	85	88
June	141	74	28	36	116	135	91
July	136	39	19	26	118	136	90
August	164	23	16	24	120	132	91
September	145	17	15	24	123	122	87
October	118	20	19	39	89	81	89
November	93	29	72	112	82	73	79
December	52	91	154	143	64	48	70
	1,000	1,000	1,000	1,000	1,000	1,000	1,000

The chief feature of the above table is the contrast between enteric, diarrhœal diseases, and enteritis on the one hand, and influenza, pneumonia, and bronchitis on the other. In the first group the influence of the warm weather is the controlling factor, and in the second the cold weather. The three warmest months in the year are December, January, and February, and the three coldest June, July, and August. Phthisis does not vary a great deal throughout the whole year, although the rates show that in the cold months there is the lowest power of resistance.

SOCIAL CONDITION.

The chief efforts of the authorities in New South Wales in the cause of charity are directed towards the rescue of the young from criminal companionship and temptation to crime, the support of the aged and infirm, and the care of the imbecile or insane; and also in granting assistance to private institutions for the cure of the sick and injured, and to societies established for the purpose of relieving the pressing necessities of those of the poorer classes who, through improvidence, and lack of employment by the bread-winner of the family, find themselves temporarily in want.

In addition to State-aided institutions, there are numerous other private charities whose efforts for the relief of those whom penury, sickness, or misfortune has afflicted are beyond all praise.

The rescue of the young from crime is attempted by means of Industrial Schools, where children who have been abandoned by their natural guardians, or who are likely, from the poverty or incapacity of their parents, to be so neglected as to render them liable to lapse into crime, are taken care of, educated, and afterwards apprenticed to useful callings; and of reformatories where children who have already committed crime are sequestered.

PUBLIC HOSPITALS.

Hospitals are essential, especially under the conditions of life in the country districts of the State, and they are accordingly found in every important country town. At the close of the year 1905 there were 132 hospitals or infirmaries in operation or nearing completion in the State, of which 124 were subsidised by the Government.

The number of beds in these institutions was 4,088, of which 3,515 were intended for ordinary cases, and 573 for infectious cases. During the year 38,646 persons were under treatment as indoor patients, and the number remaining in hospital at the close of the year was 2,536.

The following statement shows the number of admissions, discharges, and deaths for the past ten years:—

Year.	Total Patients under treatment.	Number Discharged as cured or relieved.	Deaths.		Number of Patients at the close of year.
			Number.	Per cent. under treatment.	
1896	26,697	22,915	2,059	7·7	1,723
1897	27,643	23,747	2,016	7·3	1,901
1898	29,604	25,425	2,302	7·8	1,877
1899	29,770	24,752	2,241	7·5	1,889
1900	30,592	25,269	2,336	7·6	2,055
1901	33,012	27,426	2,477	7·5	2,247
1902	34,426	28,750	2,594	7·5	2,237
1903	37,011	30,954	2,660	7·2	2,491
1904	38,430	32,751	2,431	6·3	2,467
1905	38,646	32,872	2,529	6·5	2,536

The number remaining at the close of the year may be taken as representing the average number resident. It will be seen from the table that the increase in the number of patients has been fairly regular, so that the proportion of the population to be found in hospitals is about the same in each year, the average in 1905 being 1·7 per thousand.

The death-rate per 100 persons under treatment during 1905 was 6·5, which is 11 per cent. below the decennial average. The rate for each year is stated above. The death-rate of hospitals in New South Wales compared with those of Europe is undoubtedly very high, but this to a large extent is owing to the number of deaths from accidents, which form a very considerable proportion of the total number registered—a circumstance due to the nature of the occupations of the people, and the dangers incidental to pioneering enterprise. A large majority of the accidents that occur, when not immediately fatal, are treated in the hospitals; and, indeed, these institutions, especially in country districts, are for the most part maintained for the treatment of surgical cases.

Applications for admission into the metropolitan hospitals are made to the Government Medical Officer, and it is the duty of that officer to assign the cases to the different hospitals and asylums in accordance with the nature, severity, and special character of the ailments from which the patients are suffering, and the accommodation available at the various institutions. The number of applications dealt with during 1905 was 12,948, as compared with 13,734 in the preceding year. It is necessary to bear in mind that these figures represent cases, not individuals. In some instances the same person has been in an institution several times during the year.

There are in addition six Hospitals for Insane which are under Government control, and which are fitted with all conveniences and appliances that modern science points out as most calculated to mitigate or remove the affliction. The question of insanity is dealt with further on in this chapter.

Expenditure on Hospitals.

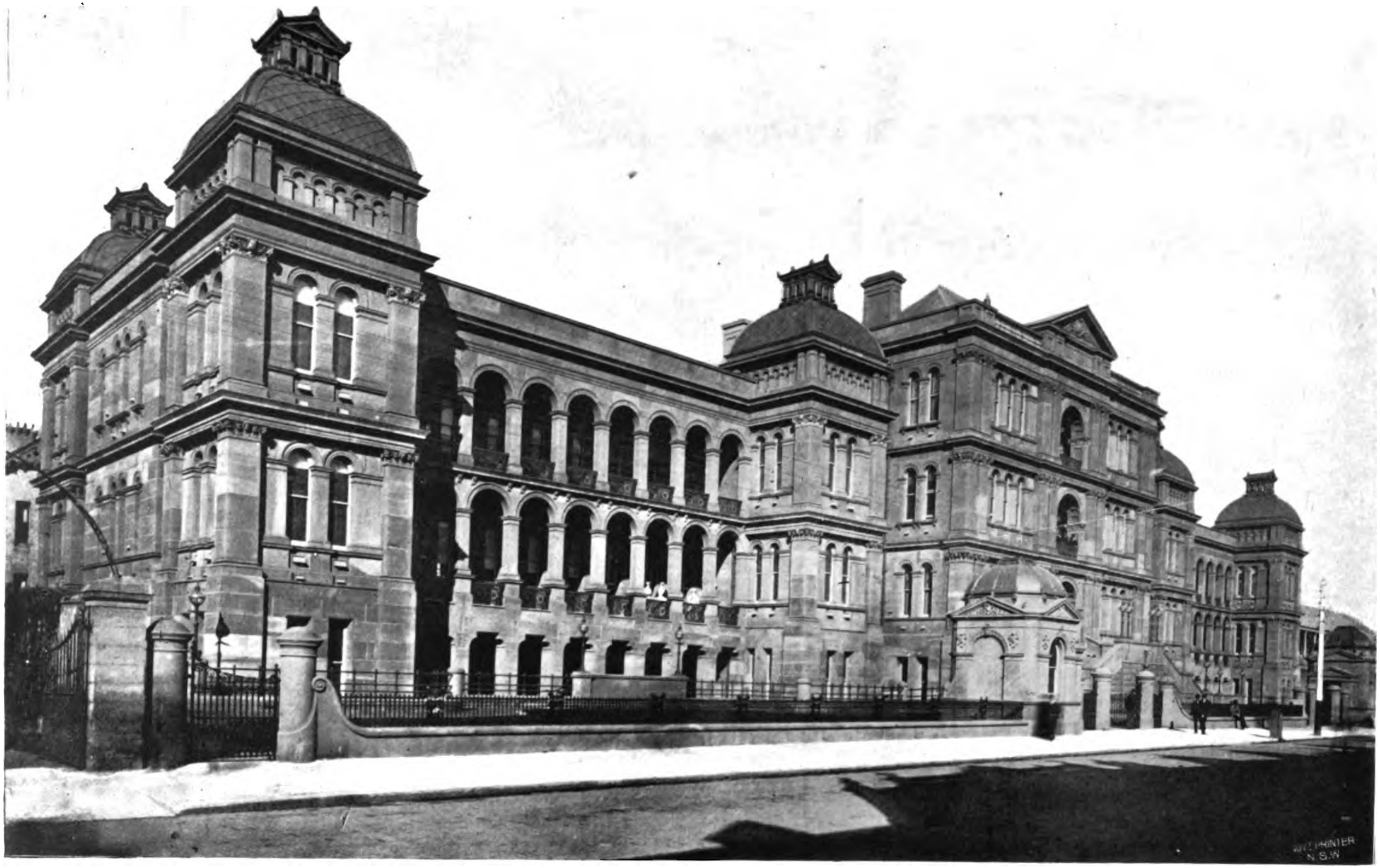
The amount expended by the State in the year 1905–06 for the maintenance of the sick poor was £22,448, the principal beneficiaries being the Royal Prince Alfred Hospital, the Sydney Hospital, the Moorcliff Hospital, each at £35 per bed, and the Carrington Convalescent Hospital, at £17 10s. per bed.

According to the hospital accounts, the total expenditure of the Government in connection with the hospitals in the Metropolitan area in 1905 was £54,345; while on the country hospitals the expenditure reached £46,631, the total expenditure for the State being £100,976. These amounts are irrespective of payments for attendance on Aborigines, expenses in connection with special outbreaks of disease in country districts which are met from the general medical vote; and the maintenance in the Asylums for the Infirm and Destitute of a large number of chronic and incurable hospital cases.

Little exact information is to hand respecting the outdoor relief afforded by hospitals, this form of charity not being so important as indoor relief; nevertheless, the number of out-door patients during 1905 was returned as 78,002.

Since 1902 a Dental Hospital has been in existence for the benefit of the poor. The number receiving relief in 1905 was 12,395.

Omitting from consideration the Government establishment at Little Bay, the expenditure in 1905 on all the hospitals of the State, for purposes other than building and repairs, was £172,859, representing an average of £45 16s. 11d. per bed. This sum is somewhat in excess of the truth, as a deduction should be made for out-patients, but the information is not available. The average cost of each indoor patient treated was £4 18s. 8d.



SYDNEY HOSPITAL.

The total revenue of hospitals, excluding that at Little Bay, from all sources was £196,305. The following statement shows the revenue and expenditure of these institutions for the year 1905:—

Revenue and Expenditure.	Metropolitan.	Country.	New South Wales.
Receipts—	£	£	£
Government aid	35,453	46,631	82,084
Private contributions	37,197	62,200	99,397
Other sources	10,376	4,448	14,824
Total Receipts	83,026	113,279	196,305
Expenditure—			
Building and repairs	9,864	23,549	33,413
Maintenance (including salaries)	64,455	87,276	151,731
Miscellaneous	12,112	9,016	21,128
Total Expenditure	86,431	119,841	206,272

The expenditure in connection with the Little Bay Hospital has not been included in the figures stated above, as that institution is entirely in the hands of the Government. At this hospital 3,596 patients were treated during the year. The number of lepers under detention at the lazaret on the 31st December, 1905, was 18. The expenditure on the Little Bay Hospital during 1905 was £18,892, and the total expenditure of the State on hospitals amounted therefore to £225,164.

Besides hospitals properly so called, there exist various institutions for the reception of fallen women; for the treatment of the blind, and the deaf and dumb; for the relief of consumptives; for ministering to the wants of destitute women; for granting casual aid to indigent persons; for the help of discharged prisoners, and for many other purposes which elicit the charitable aid of the people.

The Infants' Home, Ashfield, the Hospital for Sick Children, Glebe, the Institution for the Deaf and Dumb and the Blind, Newtown, besides other institutions in different parts of the State, receive help from the Government; but they are maintained principally by private contributions. The management of these, and, indeed, of almost all institutions for the relief of the sick, is in the hands of committees elected by persons subscribing towards their support. In addition to the above, there are several institutions under the control of the Roman Catholic body, and supported entirely by private charity. At the City Night Refuge and Soup Kitchen there were no less than 148,407 meals given during 1906, and shelter was provided in 46,269 instances.

DESTITUTE CHILDREN.

The charge of the destitute or neglected children of the State is entrusted to the State Children Relief Board, which was constituted under an Act of Parliament, and commenced its operations on the 5th April, 1881. During the twenty-four years of its existence the Board has dealt with no less than 13,906 children, who have been removed for boarding-out from the State institutions of the province, and others partly supported by public contributions. Of that number 10,016 children had been either discharged to their parents or otherwise removed from the control of the Board, so that there were remaining under its charge on the 5th April, 1906, 3,890, of whom 2,114 were boys and 1,776 were girls. Of these children, 2,111, comprising 1,184 boys and 927 girls, were boarded out to persons deemed to be eligible after strict inquiry by the Board. The rates of payment range up to 10s. per week, the highest rates being paid for infants under one year, who require more than ordinary care, and the lowest for children boarded-out to their own mothers. A strict supervision is exercised by the officers of the Board in order to see that the children are not ill-treated or neglected, and in addition to this there are voluntary lady visitors acting in the various districts who keep a constant watch upon these children of the State. About 4,000 children have grown up and been taught useful trades and profitable occupations, many of whom would otherwise have drifted into the criminal or pauper population.

The system of placing delicate young children out to nurse with healthy matronly women in the country districts has been found to work well. In April, 1906, there were 175 such children under control, at a total cost of about £3,242; and there were 254 children under the control of guardians, by whom they had been adopted, or to whom no subsidy was paid by the State. Of the apprentices, nearly all the girls were in domestic service, while the greater proportion of the boys were with farmers, orchardists, storekeepers, and artisans in healthy country districts. Taken as a whole the apprentices are turning out remarkably well, and it is very seldom there are any serious complaints either from the children or from their guardians. It is claimed that the system pursued by the Board of extending to the dependent children of this country the privileges of family life and home training in place of the monotonous and artificial style of living in large asylums has been attended with successful results. The cost to the State for maintenance, calculated on the daily average, after deducting parents' contributions, was equal to £15 8s. 0d. per child, and cannot be looked upon as excessive.

The number of children under the control of the Board in April of each year since 1881 is shown in the following table. During 1905 the deaths numbered 15, of which 8 were males and 7 females :—

Year ending April.	Boys.	Girls.	Total.	Year ending April.	Boys.	Girls.	Total.
1881	24	35	59	1894	1,606	1,203	2,809
1882	40	63	103	1895	1,822	1,352	3,174
1883	119	188	307	1896	1,954	1,502	3,456
1884	232	320	552	1897	2,085	1,586	3,671
1885	564	462	1,026	1898	2,083	1,626	3,709
1886	779	587	1,366	1899	2,104	1,618	3,722
1887	1,099	703	1,802	1900	2,156	1,688	3,844
1888	1,202	758	1,960	1901	2,205	1,705	3,910
1889	1,316	857	2,173	1902	2,073	1,647	3,720
1890	1,380	904	2,284	1903	2,115	1,690	3,805
1891	1,417	952	2,369	1904	2,087	1,692	3,779
1892	1,390	1,006	2,396	1905	2,077	1,723	3,800
1893	1,472	1,065	2,537	1906	2,114	1,776	3,890

The ages of children placed out since the inauguration of the Board's operations are as follow :—

Age.	Number.	Age.	Number.
Under 1 year......	574	8 years	1,353
1 year...............	558	9 ,, ...	1,290
2 years	895	10 ,, ...	1,107
3 ,, ...	1,018	11 ,, ...	832
4 ,, ...	1,091	12 ,, and over	1,190
5 ,, ...	1,171	Not stated	226
6 ,, ...	1,310		
7 ,, ...	1,291	Total	13,906

The largest number of children dealt with by the Board has been received from the Benevolent Asylum, Sydney, 7,423 having been transferred from that institution up to the end of April, 1906; while from the Randwick Asylum 307, and from the Orphan Schools, Parramatta, 362 children have been taken.

The gross amount expended by the Government during the year on the State Children's Relief Department, including the Parramatta and Mittagong Cottage Homes, was £67,488, while parents' contributions towards the maintenance of their children amounted to £1,727, leaving the net Government expenditure at £65,761.

The number of destitute children in State institutions, including children boarded-out and paid for by the Government, and in private institutions, at the end of each of the past ten years, was as follows:—

Year.	In State Institutions.	In Private Institutions.	Total.	Year.	In State Institutions.	In Private Institutions.	Total.
1896	3,146	1,176	4,322	1901	2,834	1,446	4,280
1897	3,154	1,200	4,354	1902	2,950	1,523	4,473
1898	3,083	1,286	4,369	1903	3,025	1,541	4,566
1899	3,070	1,381	4,451	1904	3,012	1,600	4,612
1900	3,035	1,381	4,416	1905	2,954	1,591	4,545

In 1905 the number of destitute children was 4,545, or 3·07 per 1,000 of total population; 2,111 children were boarded-out; and of the children in State institutions 586 were in industrial schools and reformatories.

There are three reformatories, viz., the Parramatta Industrial School for girls; the "Sobraon" training-ship for boys; and the Carpenterian Reformatory at Eastwood, also for boys. The training-ship for a long time was used practically as a reformatory as well as an industrial school, for the absence of a reformatory led to many boys being sent to the ship who had appeared before the Courts. In August, 1895, however, the Carpenterian Reformatory was opened on part of the Brush Farm Estate, and arrangements were made to receive therein criminal boys, and to subject them to proper discipline and to teach them useful trades. On the "Sobraon" there were 360, in the Parramatta Industrial School for Girls 102, and in the Carpenterian Reformatory 124 inmates during 1905. Further reference to these schools will be found in the chapter on Education.

The statement below shows the number of children under 15 years of age maintained in reformatories and in charitable institutions of a public and private character at the end of 1905. In the figures relating to Government asylums are included the 2,368 children supported by the State Children's Relief Department:—

Institutions.	Children.
Government	2,954
Public	467
Church of England	114
Roman Catholic	944
Methodist	30
Salvation Army	36
Total	4,545

DESTITUTE ADULTS.

The number of destitute adults, or persons 15 years of age and over, who were inmates of the various asylums of the State at the close of the year 1905, was 5,211, of whom 3,869 were males and 1,342 females. The great majority of those in the asylums are persons of very advanced years who are unable to work. The inmates of the Benevolent Asylum, Sydney, however, and of a number of similar institutions, form an exception to this rule, as a large proportion of them are destitute women who use the institutions as lying-in hospitals. As far as the metropolis is concerned, it appears that there are several small societies in existence receiving Government aid, the work of which might well be carried on by one efficiently-managed organisation, and there is doubtless a certain amount of overlapping and imposition. In connection with the subject of Government aid to charitable societies it may be remarked that there are no means of ascertaining whether the expenditure is judiciously controlled.

The following table shows the number of adults remaining in the various Benevolent Asylums at the end of each of the last ten years, and the proportion per 1,000 of population :—

Year.	Males.	Females.	Total.	Per 1,000 of Adult Population.		
				Male.	Female.	Total.
1896	2,935	1,230	4,165	6·7	3·4	5·2
1897	3,438	1,441	4,879	7·6	3·9	5·9
1898	3,501	1,393	4,894	7·7	3·6	5·8
1899	3,606	1,476	5,082	7·8	3·8	5·9
1900	3,579	1,489	5,068	7·6	3·7	5·8
1901	3,591	1,368	4,959	7·6	3·3	5·6
1902	3,188	1,342	4,530	6·6	3·2	5·0
1903	3,728	1,324	5,052	7·5	3·1	5·5
1904	3,935	1,358	5,293	7·7	3·1	5·6
1905	3,869	1,342	5,211	7·5	3·1	5·5

About 80 per cent. of the above persons are inmates of asylums maintained by the Government. The Liverpool Asylum, the Rookwood Asylum, and the two large institutions at Parramatta, are homes for males; the Benevolent Asylum, Sydney, is for females; and the institution at Newington is used chiefly for persons of this sex. Old and indigent married couples have the use of the cottage homes, Parramatta, which were opened in March, 1889.

In the following table will be found the number of adult male and female inmates of all charitable institutions from which information was received, at the close of 1905 :—

Institutions.	Males.	Females.	Total.
Government	3,594	758	4,352
Public	128	175	303
Church of England	......	69	69
Roman Catholic	72	247	319
Salvation Army	64	91	155
Hebrew	11	2	13
Total	3,869	1,342	5,211

During 1905 the deaths of 758 adults took place in the various institutions. In addition to the indoor relief, considerable aid is extended to the outside poor. Apart from medical advice and medicines, outdoor relief consists largely of supplies of provisions.

Adding together the numbers of adults and children, in order to show the proportion as compared with the whole population of the destitute in the State, the ratios per 1,000 for the last twenty-five years, at various periods up to 1900, and thereafter yearly, are found to be as follow :—

Year.	Children.	Adults.	Total.	Per 1,000 of —		
				Children under 15 years.	Adult Population.	Total Population.
1881	1,816	1,360	3,176	5·8	2·9	4·0
1886	1,929	1,925	3,854	5·0	3·2	3·9
1891	2,258	3,089	5,347	5·1	4·3	4·6
1896	4,322	4,165	8,487	9·1	5·2	6·6
1900	4,416	5,068	9,484	9·0	5·8	7·0
1901	4,280	4,959	9,239	8·6	5·6	6·7
1902	4,478	4,530	9,003	8·9	5·0	6·4
1903	4,566	5,052	9,618	9·0	5·5	6·7
1904	4,612	5,293	9,905	8·9	5·6	6·8
1905	4,545	5,211	9,756	8·7	5·5	6·6

It will be seen from the above table that the proportion of indoor paupers has remained fairly constant during the past ten years, but has increased considerably since 1891.

The receipts and disbursements of the charitable institutions in the State during the year 1905 were as shown below. The figures do not include the money received and expended by several denominational institutions, the financial condition of which is not made public :—

Receipts :—	£	Disbursements—	£
Government aid	139,299	Buildings and repairs	9,195
Private contributions	26,728	Maintenance (including salaries)	177,607
Other sources	43,050	Other expenses	22,119
Total	£209,077	Total	£208,921

PROTECTION OF THE ABORIGINES.

A Board is in existence for the protection of the aborigines, the object of which is to ameliorate the condition of the blacks, and to exercise a general guardianship over them. There are seven stations for the benefit of the aborigines. These are Cumeroogunga, on the river Murray; Warangesda, on the Murrumbidgee; Brewarrina, on the Darling; Brungle, near Gundagai; Grafton; Lismore; and Wallaga Lake, near Bermagui. The natives at the settlements are comfortably housed, and are encouraged to devote their energies to agricultural and kindred occupations, and elementary education is imparted to the children.

The amount expended by the Government during 1905 for the benefit of the aborigines was £17,197. The sum of £805 was expended on medical attendance and medicine; £1,192 on school buildings, books, &c.; £3,103 on blankets, clothing, &c.; £47 for burial expenses; and £88 for salaries. Further reference to the aborigines will be found in the chapter on Population.

INFANT PROTECTION ACT.

The "Infant Protection Act" is designed for the protection, maintenance, education, and care of infants, and to provide for the inspection and control of places established or used for their reception and care.

In addition to the affiliation clauses, the Act provides that "the person in charge of any place established or used for the reception and care of two or more infants under 7 years of age apart from their mothers shall make application to the Minister for a license of such place." The license is issued by the Minister, but the duty is imposed on the State Children Relief Board of reporting to the Minister of the propriety of granting the license. Several applications for license have been investigated and recommendations made for their issue on specified conditions.

The licensed places have been divided into two classes—one for the reception of up to five children, which includes ordinary homes, and the other for six children and over, being mostly institutions of a charitable nature for the care of infants. In the first class, 54 homes were licensed during the year ended 31st December, 1905, with an average of two children each; while in the second class eleven applications were granted to institutions which have accommodation for from six to seventy-five children. In all, 246 children were inmates at the end of the year, at ages ranging from under 1 year to 6 years. All these institutions, with the exception of the Infants' Home, Ashfield, which is subsidised by the Government, are entirely supported by voluntary contributions.

The Sydney Benevolent Asylum and the Randwick Asylum, operating under special Acts, have successfully claimed exemption from the provisions.

TOTAL EXPENDITURE ON CHARITY.

The total expenditure by the State in aid of hospitals, hospitals for the insane, and other charitable institutions, amounted in 1905 to £451,199; adding to this the amount of private subscriptions, donations, and other receipts of hospitals, &c., the poor and the unfortunate benefited during the year to the extent of about £698,000. This sum, though not excessive in proportion to the population, appears to be large in view of the general wealth of the State, which should preclude the necessity of so many seeking assistance.

The expenditure by the Government during the year 1905 upon all hospitals and asylums, with the exception of hospitals for the insane and Mission Stations for Aborigines, was £313,580. Private subscriptions, donations, and other receipts amounted to £246,466, distributed amongst the various institutions as follows:—Hospitals, £114,889; Hospitals for Insane, £25,685; State Children's Relief Board, £1,727; Charitable Institutions, £69,778; Charitable Societies, £34,387.

It was anticipated by the introducers of the Old-age Pension scheme that there would be a reduction in the Government expenditure on charity, especially in asylums. The expectation was, however, without reasonable foundation, as the classes of people affected by the two systems of relief are widely different, and no reduction can be seen in the figures in the following table, which shows the expenditure on poor relief in 1900, the year before the Old-age Pension came into force, and in 1905:—

Relief on which expended.	1900.		1906.	
	Expenditure.	Per head.	Expenditure.	Per head.
	£	s. d.	£	s. d.
Hospitals	88,463	1 4	100,976	1 4
Asylums	125,368	1 10	139,299	1 11
Charitable Societies	7,130	0 1	7,544	0 1
State Children's Relief	42,422	0 8	65,761	0 11
Hospitals for Insane	103,852	1 6	120,422	1 7
Protection of Aborigines	17,849	0 3	17,197	0 3
Old-age Pensions	....	....	510,343	6 11
Total	385,084	5 8	961,542	13 0

These figures include maintenance of patients, and wages and salaries in connection with each establishment and the administrative department generally. The cost of Old-age Pensions in 1905 amounted to 6s. 11d. per head, and of all other forms of charity to 6s. 1d. per head; so that it will be seen, even after the cost of old-age pensions has been excluded, the expenditure on hospitals and charities has increased by 5d. per head since 1900.

OLD-AGE PENSIONS.

The old-age pension scheme sanctioned by the Parliament of New South Wales specifies a pension of £26 a year, diminished by £1 for every £1 of income above £26 a year, and by £1 for every £15 of property that the pensioner possesses. Where a husband and wife are each entitled to a pension, the amount is fixed at £19 10s. a year each, unless they are living apart under a decree of the Court or a deed of separation, when the full sum of £26 will be allowed. To obtain a pension, a person must be 65 years of age, and have resided in the State not less than twenty-five years. There are also other qualifications, chiefly affecting good citizenship. No alien, Australian aboriginal, or Asiatic is entitled to a pension. Persons under 65 years of age, but over 60 years, are entitled to pensions if they are incapacitated by sickness or injury from earning their livelihood, but debility due merely to age is not considered as an incapacitating sickness. The old-age pension is a gift by the State to citizens who have contributed by taxation, and who, as the preamble to the Act declares, have during the prime of life helped to bear the public burthens of the State by the payment of taxes, and by opening up its resources by their labour and skill.

The pension system came into force on the 1st August, 1901, at which date 13,957 pensions were granted, involving a monthly payment of £28,037. The pension list gradually increased as persons entitled to claim made good their rights, and on the 1st July, 1902, the number of pensioners was 22,252, the monthly pension bill being £44,362. This was the highest point attained, and from that date onward there has been a gradual decline, both in the number of pensioners and the amount payable. The following statement shows on the 1st August of each year since the system was established, the number of pensioners and the monthly payments:—

Year.	No. of Pensioners.	Monthly Payment. £
1901	13,957	28,037
1902	22,182	44,318
1903	20,905	41,695
1904	20,438	40,617
1905	20,483	40,493
1906	20,817	40,924

From the highest point, July, 1902, to the 1st August, 1906, there was a decline of 1,365 pensions. This is due to the direct control which the Central Board of Old-age Pensions is now able to exercise over the District Boards, as very few persons not entitled to a pension either by age, residence, or character, remain long on the pension list.

The average annual pension is about £23 13s., and it has varied very little since the pension system came into force.

The figures just given represent the actual pensions paid by the bank; the number of persons who hold rights during any month is always in excess of the numbers just given. As will be seen below, the pensions that become payable in any month are reduced by deaths, withdrawals, and cancellations, and by those pensioners who fail to draw their pensions within the time allowed by law. These, taken together, amount to a considerable number. Thus, at the 1st of August, 1906, there were 21,396 pension certificates issued and still current, while the number paid by the bank during the same period, as already stated, was 20,817, a difference of 579 pensions. About 200 of these would be represented by deaths and cancellations during the month; the remaining number to make up the total would be persons entitled to draw their pensions but who failed to present themselves at the bank within the time allowed by law, or persons who had entered public institutions, and whose pensions would be temporarily suspended.

During the five years the pension system has been in operation—*i.e.*, to 1st August, 1906—8,330 pensioners died, and 1,770 pensions were cancelled. The death-rate represents 80·1 per 1,000 pensioners, which is only slightly in excess of the general average for persons of 65 years of age and upwards.

On the 1st August, 1906, the number of persons aged 65 and over in New South Wales was about 53,900, of whom about 87 per cent. were born or had resided in the State for twenty-five years. There were 20,817 persons receiving pensions, which represents 38·5 per cent. of the population over 65, and 44·4 per cent. of those qualified. The total amounts which have been appropriated for the payment of old-age pensions during each financial year up to 30th June, 1906, are as follow:—

Year.	Amount appropriated.	Per head of Population.
	£	s. d.
1901-2	436,183	6 4
1902-3	524,967	7 6
1903-4	508,133	7 2
1904-5	496,300	6 10
1905-6	489,095	6 7

Old-age pension schemes are also in operation in New Zealand and Victoria. In New Zealand the conditions are very similar to those in New South Wales, except that the pension paid is smaller, the full amount being £18 per year. During 1905, however, an amending Act was passed, by which the full amount was raised to £26 per annum. On the 31st March, 1906, there were 11,915 persons receiving a pension. The average pension was £16 18s., and the sum payable in respect of pensions during the year ended March, 1906, exclusive of management, was £254,367, or 5s. 8d. per head of population. The proportion of pensioners to those qualified by age and residence is about 34 per cent., which differs very little from the New South Wales proportion.

In Victoria the conditions are much more strict, and the payment is looked upon as a charitable grant by the Government. The maximum pension paid is 8s. per week. On the 30th June, 1906, there were 10,990 pensioners, and the payments in respect of pensions during 1905-6 were £189,127, or 3s. 1d. per head of population.

VACCINATION.

Vaccination is not compulsory in New South Wales, and is resorted to chiefly in times of scare, when an epidemic of small-pox is thought to be imminent. It is easy to discover from the returns of the Government vaccinators the years when the community was threatened by the disease, as at such times the number of persons submitting themselves to vaccination largely increased. The number returned does not include those treated by private medical officers, by whom a large number of persons are vaccinated.

In an examination of the figures dealing with vaccination since 1860, the first large increase appears in 1863 and 1864, when the number of persons treated reached 12,970 and 10,696 respectively. During the next three years the totals were a little more than half these numbers, but in 1868 and 1869, 11,237 and 21,507 vaccinations were recorded. In the next two years the totals receded to about 7,000. In 1872 the number was 17,565, and—excepting in 1877, when 16,881 were treated—during the next eight years the numbers ranged between 3,000 and 5,000. The largest number treated in any one year was 61,239 in 1881. In two years since then, the number has exceeded 7,000; but of late years the numbers have fluctuated, but with a constant tendency to decrease, until in 1905 only thirty-two persons were vaccinated.

The following table shows the ages of the patients in the metropolis and country treated by the Government Medical Officers, and the cost of vaccination, during the last five years :—

Classification.		1901.	1902.	1903.	1904.	1905.
Under 1 year..........	Metropolitan	2	7	...	...	...
	Country	47	15	2	...	...
1 year and under 5 ...	Metropolitan	14	10	4	...	...
	Country	317	118	39	2	5
5 years and under 10	Metropolitan	24	19	7	...	...
	Country	888	374	244	9	12
10 years and upwards	Metropolitan	26	51	1	...	...
	Country	763	302	308	9	15
Total, New South Wales...........	Metropolitan	66	87	12	...	...
	Country	2,015	809	593	20	32
		2,081	896	605	20	32
Cost of Vaccination ....£		264	116	85	3	4

SICKNESS AND INFIRMITY.

Up to the present there have been practically no statistics of sickness compiled in New South Wales, although the returns furnished under the Friendly Societies Act contain valuable information bearing upon the duration of sickness among select bodies of men. So far the only information available is that obtained at the Census, where particulars of the whole population are collected. The difficulty, however, is to define what constitutes sickness. For the purposes of the Census, it was taken to express inability for the time-being to follow one's usual occupation in life, from whatsoever cause arising; and only those actually unable to work were counted as sick, or as suffering from an accident, as the case might be; in the case of those having no occupation, bedfast sickness was understood.

Assuming the results of 1901 to be indicative of the general condition of the population, it would appear that rather more than 1 per cent. of the people constantly suffer from some form of disablement arising from sickness or the result of an accident. The following statement shows the number and proportion per 1,000 of each sex suffering from each cause :—

Cause of Disablement.	Number.			Proportion per 1,000 living.		
	Males.	Females.	Total.	Males.	Females.	Total.
Sickness	8,389	5,129	13,518	11·81	7·95	9·98
Accident..............................	2,127	443	2,570	3·00	0·69	1·89
Total	10,516	5,572	16,088	14·81	8·64	11·87

The sickness rate for males is half as high again as that for females, while the accident rate is four and a half times as high, the disparity between the sexes being chiefly due to the greater risks to which males are exposed. Of the total number disabled, nearly 15 per cent., namely 1,423 males and 1,018 females were being treated in hospitals. The following table shows the number in various age groups suffering from sickness and accident, and the proportion per 1,000 living in each group of both together :—

Age Group.	Sickness.		Accident.		Proportion per 1,000 living in each group of both together.	
	Males.	Females.	Males.	Females.	Males.	Females.
Under 10	305	322	63	38	2·23	2·24
10—19......	640	589	283	58	6·07	4·29
20—39........................	1,676	1,472	646	97	10·38	7·50
40—64..	2,761	1,395	793	134	25·34	14·66
65—79.....	2,405	1,019	322	88	111·97	64·05
80 and over	590	322	19	27	226·98	150·97
Not stated..................	12	10	1	1	......	......
Total, All Ages......	8,389	5,129	2,127	443	14·81	8·64

With one exception—the age group under 10—the males show higher rates than the females, the differences becoming greater as the ages increase. In each sex the rates increase from the lowest to the highest ages. From age 40 the rates increase very rapidly, until at age 80, one-fifth of the males and one-seventh of the females are laid up.

Although the Census experience would not be utilised by an actuary in establishing rates for sick pay in a friendly society, it is important as showing the probable loss among the whole population. Assuming, therefore, that the rate of sickness existing on the Census day will prevail throughout the whole year, it is calculated that between the working ages—20 and 65—a man will probably be sick 5·89 days per year. The experience of friendly societies in New South Wales has not been published, but the members of the I.O.O.F., one of the most important societies, received on the average, in 1901, sick pay for 5·55 days. The 1893-97 experience of the Manchester Unity in England shows that members between 20 and 65 will be laid up for 11·94 days per annum.

Deaf and Dumb.—The number of persons who were deaf and dumb in 1901 was 390, representing a proportion of one person in every 3,474 of the population. The proportion of deaf-mutes has decreased since 1891. It is, however, feared that the full number has not been returned, because the male rate is less than the female—the general experience elsewhere being in the contrary direction. Furthermore, if the table below which gives the rates in various age groups be studied, it will be seen that the rate at ages 10 to 15 is the highest; whereas, seeing that deaf-mutism is an affliction of childhood, it is reasonable to expect that the rates below those ages would be the highest. This probably arises from the unwillingness of parents to make known this infirmity in their children.

Age Group.	Number.		Proportion per 1,000 living.	
	Males.	Females.	Males.	Females.
Under 5	2	3	·02	·04
5— 9	25	14	·30	·17
10—14	38	36	·47	·45
15—19	21	33	·30	·47
20—44	82	87	·31	·36
45—64	20	24	·21	·34
65 and over	1	3	·04	·02
Not stated	......	1	......	......
Total	189	201	·27	·31

Excluding children under 10, it will be seen that the rate declines more or less regularly as the age advances. At all ages, except from 5 to 15, the female rate is higher than the male.

Blind.—The number of persons afflicted with blindness at the Census of 1901 was 884. This is equivalent to one person in every 1,533. The higher proportion among males is probably due to the greater risk of accident to which they are exposed. Blindness comes on with approaching old age, as will be seen below, where the numbers and proportion in various age groups are given :—

Age Group.	Number.		Proportion per 1,000 living.	
	Males.	Females.	Males.	Females.
Under 10	15	11	·10	·07
10—19	31	24	·20	·16
20—44	99	70	·37	·29
45—54	76	27	1·29	·62
55—64	93	54	2·56	1·96
65—74	140	75	6·74	5·19
75—84	57	61	10·44	13·81
85 and over	23	26	28·75	38·35
Not stated	1	1	......	......
Total	535	349	·75	·54

Among both sexes the rate increases from the lowest to the highest ages, and rapidly after age 65. At all ages below 65 the male rate is higher than the female ; after that age the female rate is higher, owing to the fact that women live longer than men. The majority of persons at young ages afflicted with blindness were probably born so.

INSANITY.

The number of insane persons in New South Wales, under official cognizance in the various Government hospitals for the treatment of the insane, at the end of 1905 was 5,252, equal to 3·51 per 1,000 of the population, or corresponding to one insane person in every 285. This rate is slightly below that prevailing in England.

The hospitals for insane under the immediate control of the Government are seven in number—six for ordinary insane, and one at Parramatta for criminals. Besides these there are licensed houses at Picton, Ryde, and Cook's River (near Sydney).

From the table given below, showing the distribution of the patients, it will be seen that, in addition to the 5,252 inmates of the New South Wales asylums, 25 were located in hospitals in South Australia. This was in terms of an arrangement which has been made with the Government of that State, whereby patients from the Broken Hill District are sent to South Australia :—

Name of Hospital.	Number on Register.		
	Males.	Females.	Total.
Government Hospitals—			
Callan Park	575	469	1,044
Gladesville	599	393	992
Parramatta, free	723	400	1,123
,, criminal	52	6	58
Newcastle	242	176	418
Rydalmere	456	290	746
Kenmore	470	342	812
Licensed Houses—			
Cook's River	17	24	41
Picton	......	1	1
Ryde	......	17	17
South Australian Hospitals	12	13	25
Totals	3,146	2,131	5,277

In the following table will be found the number of persons in hospitals for the insane at the close of each year, and the proportion per 1,000 of the population in quinquennial periods since 1876 :—

Period.	Number of Insane Persons.			Proportion per 1,000 of Population.		
	Males.	Females.	Total.	Males.	Females.	Total.
1876-1880	5,901	3,024	8,925	3·20	1·96	2·63
1881-1885	7,409	4,548	11,957	3·12	2·34	2·77
1886-1890	8,883	5,629	14,512	3·09	2·35	2·77
1891-1895	10,520	6,654	17,174	3·23	2·37	2·83
1896-1900	12,408	8,022	20,430	3·54	2·58	3·09
1901	2,677	1,798	4,475	3·70	2·74	3·24
1902	2,816	1,857	4,673	3·80	2·78	3·32
1903	2,942	1,993	4,935	3·90	2·94	3·45
1904	3,021	2,054	5,075	3·91	2·98	3·46
1905	3,134	2,118	5,252	3·95	3·02	3·51

There seems little doubt that insanity is slowly but steadily increasing in New South Wales, as it is in the United Kingdom and other countries In England and Wales the rate has risen from 2·75 per 1,000 of the population in 1879, to 3·51 in 1904. The greater part of this increase is no doubt rightly attributed to an improvement in the administration of the Commissioners in Lunacy, by which a more accurate knowledge of the number of cases existent in the country has been gained ; but the steady growth of the rate in recent years, when statistical information has been brought to a high pitch of perfection, plainly points to the fact that the advance of civilisation, with the increasing strain to which the struggle for existence is subjecting body and mind, has one of its results in the growth of insanity. In all the

States of Australasia, with the sole exception of Tasmania, there is seen the same state of affairs as the insanity returns of England and Wales disclose, although the conditions of life press much more lightly on the individual here.

An inspection of the table given below of the insane persons both male and female, in each State at the end of 1905, and the rate per 1,000 inhabitants of each sex, will show that the rate of insanity varies greatly in the different provinces, and that the rate for males is everywhere higher than that for females :—

State.	Year.	Number of Insane.			Per 1,000 of Population.		
		Males.	Females.	Persons.	Males.	Females.	Persons.
New South Wales	1905	3,134	2,118	5,252	3·95	3·02	3·51
Victoria....................	1905	2,436	2,335	4,771	4·00	3·83	3·92
Queensland	1905	1,172	766	1,938	4·04	3·22	3·67
South Australia	1905	565	418	983	2·86	2·31	2·60
Western Australia	1904	324	114	438	2·38	1·25	1·93
Tasmania	1904	243	198	441	2·61	2·28	2·46
Commonwealth......	....	7,874	5,949	13,823	3·70	3·11	3·42

There is one remarkable difference between the Australian States and England and Wales, namely, that in England the greater proportion of insanity is found amongst women, whereas in Australia it is found amongst men. In England and Wales the rate per 1,000 males in 1904 was 3·34, and per 1,000 females 3·66.

The number of admissions during the last twenty years to hospitals for the insane, and the proportion per 1,000 of the mean population, are given below :—

Year.	Admissions and Readmissions.	Proportion to population per 1,000.	Year.	Admissions and Readmissions.	Proportion to population per 1,000.
1885	567	0·61	1896	740	0·58
1886	567	0·58	1897	692	0·54
1887	532	0·53	1898	730	0·56
1888	587	0·57	1899	796	0·60
1889	550	0·52	1900	859	0·63
1890	611	0·55	1901	848	0·62
1891	596	0·52	1902	947	0·68
1892	666	0·57	1903	1,065	0·75
1893	686	0·57	1904	1,020	0·71
1894	712	0·58	1905	1,009	0·68
1895	715	0·57			

From the foregoing table it will be seen that the rate of admissions decreased until 1891, when the proportion was 0·52 per 1,000 of population, and then increased gradually until 1899, when it was equal to that of 1885. From 1900 the increase has been more pronounced, the highest rate appearing in 1903, in which year the largest number of readmissions was recorded. Prior to 1893 there was no law in force to prevent the influx of insane into the State. In that year Act 56 Vic. No. 23 came into force, section 4 rendering the owner, charterer, agent, or master of a vessel liable for the maintenance of any insane person landed in the State.

Detention in the hospitals for the insane is usually terminated by the discharge of the patient on recovery, or for probation when relief has been afforded, to which, of course, must be added removal by death. Omitting the few cases where patients absconded, the next table shows, in quinquennial periods, the total number of patients who were discharged from the hospitals, either on account of recovery, permanent or temporary, or who died, and the proportion borne by each to the average number resident during each period:—

Period.	Average Number Resident.	Discharged—recovered or relieved.		Died.	
		Number.	Per cent. of Average Number Resident.	Number.	Per cent. of Average Number Resident.
1881-1885	11,577	1,184	9·92	755	6·52
1886-1890	14,025	1,386	9·88	974	6·94
1891-1895	16,631	1,655	9·95	1,092	6·57
1896-1900	19,629	1,873	9·54	1,251	6·37
1901-1905	23,103	2,311	10·00	1,673	7·24

From this it will be seen that the general tendency is for the percentage of discharged patients to decrease, and for the percentage of deaths to increase. This is accounted for by the fact that a large proportion of insane are suffering from general paralysis, a disease which has almost invariably a fatal termination.

During the last ten years there were 7,470 male and 4,952 female patients under treatment, so that the proportion per cent. of the total number belonging to each class was :—

	Males.	Females.
Recovered	26·93	32·88
Relieved	3·67	5·45
Died	26·60	18·92

The returns for the same period show the following results :—

	Males.	Females.
Average annual discharges	228	190
Average annual readmissions	72	62

Whence it appears that of the patients discharged as recovered or relieved, some 31·6 per cent. of males and 32·6 per cent. of females are readmitted. Deducting, therefore, from the number of discharges the probable cases of relapse, it will be found that out of every 1,000 cases which leave the hospitals every year the number of permanent recoveries, temporary recoveries, and deaths, will be represented in the following proportions respectively :—

	Males.	Females.
Permanent recoveries	366	451
Temporary recoveries	169	218
Deaths	465	331

Hence it may be said that out of every thousand males who become inmates of asylums for the insane, 366 will be released from their suffering by recovery, and 634 only by death; and of females, the proportion will be 451 by recovery, and 549 by death. As the average age of the patients does not differ greatly in the case of both sexes, the comparison may be accepted as a fair one, especially as the average time of residence in the asylum is also about the same.

The average period of residence can be determined indirectly from a comparison between the number of persons admitted and those resident on a given date, and it would appear that for the ten years which closed with 1905, the average was 5·21 years for males and 5·06 years for females.

A reference to the ages of the 6,303 patients under treatment during the year 1905 shows that 3,045, or 48·3 per cent. of the total, were between 30 and 50 years of age; 977, or 15·5 per cent., were between 15 and 30 years; 2,158, or 34·2 per cent., were 50 years and over; while only 123 (2·0 per cent.) were under 15 years.

Juvenile lunatics are as a rule sent to the Hospital for the Insane at Newcastle—an asylum which is set apart for imbecile and idiotic patients; so that of the 123 mentioned as being under 15 years of age, the majority were in that institution.

In the following table will be found the percentages of the various causes of insanity. The calculations are made on the apparent or assigned causes in the cases of all patients admitted and readmitted into the asylums and licensed houses for the insane during the last quinquennium. For purposes of comparison the experience of England and Wales is added:—

Cause.	Males.		Females.	
	New South Wales.	England and Wales.	New South Wales.	England and Wales.
	per cent.	per cent.	per cent.	per cent.
Domestic Trouble, Adverse circumstances, Mental anxiety	14·51	14·30	18·37	18·56
Intemperance in drink	16·28	19·00	6·67	7·49
Hereditary influence, ascertained; Congenital defect, ascertained	17·46	20·83	18·87	22·92
Pregnancy, Lactation, Parturition, and Puerperal state, Uterine, and Ovarian disorders, Change of life	......	......	10·78	10·89
Previous attacks	15·26	13·47	16·90	17·78
Accident, including Sunstroke	5·55	4·69	1·37	·69
Old age	6·84	5·96	4·85	6·73
Puberty	2·71	1·09	2·35	1·00
Epilepsy and diseases of skull and brain	7·59	20·66	4·80	13·94
Other causes ascertained	13·80		15·04	

Intemperance in drink is popularly supposed to be the most fruitful cause of insanity, but as will be seen from the above table hereditary influence is the chief factor both here and in England. The figures moreover prove that insanity arising from intemperance is not nearly so common in this State as in the old country. Amongst females the chief causes of insanity in the States are hereditary influence and pregnancy, &c. It is believed that hereditary influence and congenital defect are responsible in New South Wales for a much larger percentage of cases than the number shown in the table, and that of the unknown causes the great majority should be ascribed to hereditary influences. The small proportion of cases set down to these two causes is simply due to the difficulty of obtaining knowledge of the family history of a large number of those who enter the asylums.

Criminal lunatics are confined at Parramatta. At the end of 1905 the number in confinement was 58, of whom 52 were males and 6 females, as compared with 65 twelve months before. The offences for which the criminal insane are detained are amongst the blackest in the calendar. For instance, of the 58 under detention, 15 had committed murder, 10 were guilty of cutting and wounding and shooting with intent, 6 had committed arson, 5 were guilty of burglary; while the remainder were all guilty of serious crimes, either against the person or against property.

The average weekly cost of maintaining insane patients in the hospitals during the year 1905 was about 10s. 10d. per head, of which the State paid 8s. 9¾d., the balance being made up by contributions from the estates of the patients themselves, or by their friends. The subjoined table shows the average weekly cost per head, and the average private contributions, from 1896 to 1905:—

Year	Average number resident.	Cost of maintenance of Patients.	Cost per head to State.	Contribution per head from private sources.	Total weekly cost per head.
	No.	£	s. d.	s. d.	s. d.
1896	3,666	99,900	9 0¼	1 5½	10 5¾
1897	3,780	105,444	9 3	1 5¾	10 8¾
1898	3,868	111,084	9 5	1 7½	11 0½
1899	3,969	114,451	9 5½	1 7½	11 1
1900	4,131	115,790	9 2	1 7½	10 9½
1901	4,225	123,531	9 5¼	1 9½	11 2¾
1902	4,376	143,253	10 11¼	1 7¾	12 7
1903	4,580	151,399	10 10	1 10½	12 8½
1904	4,742	139,974	9 5¾	1 9¼	11 4¼
1905	4,901	137,971	8 9¾	2 0¼	10 10

The average weekly expenditure per patient during the year 1905 in each of the hospitals for insane did not vary greatly. In Gladesville, Callan Park, and Kenmore, it ranged from 8s. 10½d. to 9s. 9¾d.; in Parramatta it was 8s. 3½d.; and in Newcastle and Rydalmere, 8s. 0½d. and 7s. 10¾d. respectively.

In the course of the last ten years the number of patients resident in the hospitals for insane has increased by 33·7 per cent.; and during the same period the increase in expenditure has equalled 38·1 per cent.

DIVORCES.

The grounds on which divorces and judicial separations are granted in New South Wales will be found set forth in the chapter entitled "Law and Crime." Since the passing of the existing Act of 1892, by which the grounds of divorce were greatly increased, the business of the Divorce Court has grown enormously; indeed, so much has this been the case that out of a total of 5,071 petitions for divorce, 452 for judicial separation, and 51 for nullity of marriage, presented to the Court from 1873 to the end of 1905, no less than 4,413 petitions for divorce, 384 for judicial separation, and 41 for nullity of marriage, representing 87 per cent. of the total petitions, were presented in the course of the last fourteen years. Of the 5,071 petitions for divorce—1,487 of which were presented *in forma pauperis*—230 were dismissed and 1,082 were not proceeded with, to the 31st December, 1905, In the remaining 3,759 cases, decrees *nisi* were granted, of which 3,423 had been made absolute, and 336 had not been made absolute to the end of the year mentioned. Of the 452 petitions for judicial separation, 17 were dismissed, 215 were not proceeded with, and the remaining 220 were granted. During the period of thirty-three years there were only 51 petitions for nullity of marriage. Of these 12 were not proceeded with, 3 were dismissed, and of the remaining 36 granted, 31 were made absolute up to the end of 1905. Of 50 petitions for restitution of conjugal rights, 4 were dismissed and 30 were not proceeded with. In only 16 cases were decrees *nisi* granted.

A statement of the divorces, judicial separations, and decrees of nullity of marriage granted in New South Wales in five-year periods to 1897, and annually during the last eight years, will be found below :—

Period.	Divorces.		Judicial Separation Granted.	Nullity of Marriage.	
	Decrees *nisi.*	Decrees absolute.		Decrees *nisi.*	Decrees absolute.
1873-1877	55	33	...	...	...
1878-1882	85	70	...	...	...
1883-1887	141	120	8	2	2
1888-1892	305	224	31	5	5
1893-1897	1,403	1,308	55	7	7
1898	244	229	17	3	3
1899	230	205	17	2	2
1900	216	216	14	3	3
1901	252	207	20	...	...
1902	241	236	21	4	4
1903	204	182	14	2	2
1904	214	213	8	3	...
1905	170	180	15	5	3
Total	3,760	3,423	220	36	31

It has already been explained that until 1873 the Supreme Court of the State had no jurisdiction in divorce. From the 1st July in that year down to the end of 1892 the number of divorce decrees made absolute was 447. In the month of August, 1892, the new Divorce Act had come into force, and in 1893 the number of decrees rose to 247, and in the following year to 288; but in 1905 the number had decreased to 180. The number of divorces per 10,000 marriages in New South Wales was 347 during the two years 1893-94, 277 during the five years 1895-99, 206 during the five years 1900-04, and 164 in 1905. Of course, it is only fair to assume that after the new Act was passed in 1892 advantage was taken of its provisions to dissolve marriages which would have been broken long before had the grounds on which divorce is granted always been the same; and this might account for the diminished number of divorces granted since 1895. Bearing this in mind, however, it must be confessed that the number of decrees absolute in 1905 was still very large.

The total number of divorces, reckoning as a divorce only those cases where the decree has been made absolute, from 1873 to 1905, was 3,674, of which 3,423 were divorces, 31 cases of nullity of marriage, and 220 judicial separations. In the following pages, where certain particulars of divorce are given, these 3,674 cases are considered as a whole.

The total number of decrees granted at the instance of the husband was 1,124; and at the instance of the wife 2,550. The next statement gives the sex of the petitioner for each case of divorce, judicial separation, and nullity of marriage :—

	Divorce.	Judicial Separation.	Nullity of Marriage.
Husband	1,082	25	17
Wife	2,341	195	14

Of every 100 decrees granted in the State, the wife has been the petitioner in 69, and the husband in 31 cases.

In three out of every ten successful divorce petitions, relief is sought on more than one ground, and to give a statement of the grounds as they are set forth in the petitions would be to enter into possibly unnecessary detail. The appended table, therefore, only shows the more important grounds, chief amongst which are adultery, cruelty, desertion, and habitual drunkenness :—

Grounds of Suit.	Divorces (Decrees *Nisi* made absolute).	Judicial Separation Granted.	Decrees of Nullity of Marriage made absolute.	Total.
Adultery	1,132	32	...	1,164
,, (Incestuous)	2	1	...	3
,, and cruelty, desertion	283	22	...	305
,, and habitual drunkenness, &c.	58	4	...	62
,, and imprisonment for three years	1	...	...	1
,, repeated assaults, and cruel beatings	7	1	...	8
Bigamy and adultery, cruelty, and desertion	35	...	19	54
Cruelty	...	69	...	69
,, and attempt to murder by administering poison	1	...	...	1
,, and desertion, habitual drunkenness, &c.	240	19	...	259
Desertion	1,470	9	...	1,479
,, and frequent convictions for crime	3	...	...	3
,, and habitual drunkenness, &c.	43	...	...	43
,, and imprisonment for three years and upwards	2	...	...	2
,, repeated assaults and cruel beatings	1	...	...	1
Habitual drunkenness and neglect to support, &c.	93	4	...	100
Impotency	1	...	4	5
Imprisonment for three years and upwards	17	...	...	17
Lunacy of petitioner	...	...	1	1
Non-consummation of marriage	1	...	7	8
Repeated assaults and cruel beatings	30	...	...	30
By consent, without admissions	...	59	...	59
Total	3,423	220	31	3,674

Of the 3,423 divorce decrees granted up to the end of 1905, 1,132 were grounded on the act of adultery, 2 on incestuous adultery, and 35 on adultery with bigamy, the respondent having broken the law by going through a form of marriage, making altogether a total of 1,169 decrees; and if to this number be added those cases in which adultery was allied with habitual drunkenness, cruelty, desertion, &c., or with any two or more of these grounds, no less than 1,518 decrees are obtained, or 44·3 per cent. of the total number. Desertion is a common cause of dissolution of marriage. On this ground alone as many as 1,470 decrees, or 42·9 per cent. of the total, were granted; and the details disclose the fact that in 607 other cases in which divorce was granted the petitioner had been deserted by the respondent. A divorce cannot be granted on the ground of cruelty alone, but there were decrees granted in 567 cases in which cruelty was alleged, together with other grounds. Habitual drunkenness was included as a reason for divorce in 437 cases, in 96 of which it was the principal ground on which the petition was based; in 283 cases it was allied with cruelty, desertion, or neglect to support, and in the other 58 cases with adultery or other reasons; so that, altogether, habitual drunkenness entered into 12·8 per cent. of the total number (3,423) of divorces granted.

Of the 3,674 marriages which resulted in divorce or judicial separation, or which were nullified, the great majority were celebrated in the Commonwealth, and four-fifths in New South Wales alone. The actual number celebrated in this State was 2,994, or 81·5 per cent. of the total number; and in all Australasia, 3,415, or 93·0 per cent. Of the other 259 marriages, 217, or 5·9 per cent. of the whole number, took place in the United Kingdom, namely, 185 in England, 9 in Wales, 11 in Scotland, and 12 in Ireland. The countries where the marriages were celebrated will be found in the following table:—

Marriages celebrated in—	Divorces, Judicial Separations, and Nullity of Marriage.	Marriages celebrated in—	Divorces, Judicial Separations, and Nullity of Marriage.
New South Wales	2,994	Scotland	11
Victoria	170	Ireland	12
Queensland	104	India	8
South Australia	40	United States	8
Western Australia	4	Other Countries	23
Tasmania	23	Country not stated	3
New Zealand	80		
England	185		
Wales	9	Total	3,674

The religious denomination, as shown in the marriage certificate, is that of the minister officiating at the marriage ceremony, and, excepting matrimonial agencies, represents the religious belief of at least one of the parties. In the following table will be found the denomination of marriages in all cases of divorce, judicial separation, and nullity of marriage:—

Denomination.	Divorces, Judicial Separations and Nullity of Marriage.	Denomination.	Divorces, Judicial Separations, and Nullity of Marriage.
Church of England	1,500	Church of Christ	8
,, ,, Free	16	Unitarian	12
Roman Catholic	359	Hebrew	27
Methodist	391	Others	23
Presbyterian	530	Registrar	352
Baptist	61	Not stated	25
,, Independent	16	Matrimonial Agencies	81
Congregational	260		
Lutheran	13	Total	3,674

From this table it will be seen that of the 3,674 divorces, &c., up to the end of 1905, 1,500, or 40·8 per cent., were solemnised by the Church of England, the next in order being the Presbyterians with 530, or 14·4 per cent., followed by the Methodists, 391 (10·6 per cent.); Roman Catholics, 359 (9·8 per cent.);

and Congregational, 260 (7·1 per cent.). In 352 cases, or 9·6 per cent., the ceremony had been performed at a Registrar's office, and in 81 cases (2·2 per cent.) at matrimonial agencies.

Of the 3,674 couples who were divorced or judicially separated, or whose marriage was declared null, the duration of marriage ranged from one to fifty years, as shown in the appended table :—

Duration in Years.	Divorce, Judicial Separation, and Nullity of Marriage.	Duration in Years.	Divorce, Judicial Separation, and Nullity of Marriage.
1	31	25–29	135
2	45	30–34	49
3	90	35–39	19
4	185	40–44	8
5–9	1,194	45	2
10–14	1,025	47	1
15–19	607	50	1
20–24	282		
		Total	3,674

From the foregoing table it will be seen that 351 couples, or 9·6 per cent. of the total had been married for a period of less than 5 years; 1,194, or 32·2 per cent. of the whole number, had been married for periods ranging from 5 to 10 years; 1,025 or 27·9 per cent. between 10 and 15 years; and 607 or 16·5 per cent. between 15 and 20 years. In no less than 417 cases the duration of the marriage was between 20 and 30 years; while in 80 cases the period was even greater, extending, indeed, over 40 years in the case of 12 couples. Marriages of long duration are, therefore, just as liable to be severed by the Divorce Court as those of shorter length. The average duration of marriage where decree absolute was obtained was 11·8 years; of judicial separations, 15·4 years; and nullity of marriage, 7·3 years; the average for the 3,674 dissolutions being 12·0 years.

The presence of a family does not deter the aggrieved party from seeking redress at law. A table showing the number of children to each family, and also the cases where no issue was born to the marriage, is given below :—

Number of Children.	Divorce, Judicial Separation, and Nullity of Marriage.	Number of Children.	Divorce, Judicial Separation, and Nullity of Marriage.
0	1,200	10	9
1	880	11	9
2	597	12	4
3	367	13	1
4	216	14	1
5	136	15	1
6	99	Not stated ...	31
7	52		
8	38		
9	33	Total	3,674

In 32·7 per cent. of the cases in which the decree sought for was granted, the ties between the parties had not been strengthened by the birth of children;

for of the 3,674 successful petitions for divorce, judicial separation, or nullity of marriage, no less than 1,200 of the parties were childless, while the number may have been even larger than this, as in 31 other cases the information did not disclose particulars regarding the fruitfulness of the unions. The number of children affected by the other 2,443 decrees was 6,557, and if allowance be made on account of the 31 cases referred to, it may possibly have reached 6,620.

The conjugal condition of the contracting parties to the marriages concerning which the petitions for divorce and nullity of marriage were made absolute, and judicial separations were granted, is shown in the following table :—

Conjugal Condition of Males.	Conjugal Condition of Females.				Total Males.
	Spinster.	Widow.	Divorced.	Not stated.	
Bachelor	3,079	149	10	...	3,238
Widower	135	58	4	1	198
Divorced	9	4	2	...	15
Not stated	52	9	...	108	169
Total, Females	3,275	220	16	109	3,620

These figures are exclusive of 35 decrees made absolute on account of a previous marriage, as in 33 cases the husband was previously married and the wife in 2 cases. There were also 19 nullity suits made absolute, 8 on account of the previous existing marriage of the husband, and 11 on account of the previous existing marriage of the wife.

The ages of the parties are not of great value unless combined with the duration of marriage. The large number whose ages are not ascertained also detracts from the value of the information. The ages were unknown in 750 marriages or 20 per cent. of the total, and of the remaining 2,924, it may be said that the great majority related to marriages contracted between parties of suitable ages, 1,988 being between husbands of the ages from 21 to 39 years inclusive, and wives of the ages from 18 to 30 years inclusive. In 809 cases, however, the marriage had been contracted at very early ages, the husband being below 21 years in 312 cases, and the wife below 18 in 497 cases, while there were 112 cases in which the husband was less than 21 and the wife less than 18 at the time of marriage. There were only 99 cases in which the husband had been 40 or over at the time of marriage, and 111 in which the wife had been 31 or over, while unions in which the husband had been 40 or over and the wife 31 or over numbered but 44.

The nationalities of husbands and wives whose marriages were dissolved call for no particular comment. Of the husbands, natives of New South Wales, England, Ireland, Victoria, and Scotland form the only large groups, in the order named ; while among the wives the order is slightly altered, Victorians coming next to Englishwomen. As might be expected, there is a much larger preponderance of natives of New South Wales among the wives than among the husbands, the numbers being 2,029 and 1,515 respectively, while in 1,135 cases both husband and wife were natives of the State. There were 925 Englishmen and 591 Englishwomen whose marriages were dissolved, while England was the birthplace of both husband and wife in 302 cases. After these the most numerous groups in which the husband and wife were natives of the same country were those of Victoria and Ireland, but in these groups there were only 52 and 46 cases respectively. The other groups, except the 27 cases in which both husband and wife were natives of Scotland, are too small to deserve mention.

HABITATIONS OF THE PEOPLE.

The housing of the people is an important indication of the social condition of a country, as the dwellings, judged by the materials of which they are built, the number of rooms in them, and the number of occupants, are an indirect measure of the well-being of the persons who inhabit them.

The following statement shows the various kinds of habitations or dwellings, the number of persons residing therein, and the proportion of each to the total at the census of 1901:—

Dwellings.	Number.	Occupants.	Proportion per cent.		Occupants per Dwelling.
			Dwellings.	Occupants.	
Inhabited—					
Private dwellings	237,448	1,221,571	88·35	90·70	5·14
Boarding-houses	4,045	42,336	1·50	3·14	10·47
Hotels	3,093	35,544	1·15	2·64	11·49
Other households	368	6,664	·14	·50	18·11
Institutions	452	18,978	·17	1·41	41·99
Tents and camps	7,096	18,227	2·64	1·35	2·57
Total inhabited	252,502	1,343,320	93·95	99·74	5·32
Uninhabited	14,831	....	5·52	....	....
Being built	1,438	....	·53	....	....
Migratory population	....	3,500	....	·26	....
Total	268,771	1,346,820	100·00	100·00	....

Private dwellings sheltered 90·7 per cent., boarding-houses 3·1 per cent., and hotels 2·6 per cent. of the people. Hotels numbered 3,093, or a proportion of 1 to every 440 of the population.

The dwellings, including inhabited, uninhabited, and those being built, classified according to the materials of which they were constructed, were as follows in 1901:—

Material of which built.	Number.	Proportion per cent.
Stone	10,793	4·02
Brick	92,879	34·56
Concrete, adobe, pisé	1,525	0·57
Iron	5,380	2·00
Wood, slabs	140,482	52·27
Lath and plaster, mud, bark	4,952	1·84
Canvas, calico	8,874	3·30
Indefinite, unspecified	3,886	1·44
Total	268,771	100·00

The two principal materials used for building are wood and bricks, more than half the dwellings being built of the former material, and over one-third of the latter; 4 per cent. are built of stone, and 2 per cent. of iron. The dwellings constructed of canvas and calico are almost entirely tents.

The next table shows the number of houses of various sizes, and the population living therein:—

Number of Rooms in House.	Number of Houses.	Occupants.	Proportion per cent.		Persons to a House.
			Houses.	Occupants.	
1	6,755	10,209	2·78	·79	1·51
2	14,079	41,160	5·80	3·18	2·92
3	23,340	92,865	9·61	7·17	3·98
4	50,858	241,683	20·95	18·65	4·75
5	55,294	292,060	22·77	22·54	5·28
6	40,246	236,280	16·57	18·23	5·87
7 to 10	42,825	283,975	17·64	21·92	6·63
11 to 15	6,764	57,246	2·79	4·42	8·46
16 to 20	1,533	17,579	0·63	1·36	11·47
Over 20	1,123	22,633	·46	1·74	20·15
Total not stated	2,137	10,425	......	......	......
Total.........	244,954	1,306,115	100·00	100·00	5·33

It will be seen that 57 per cent. of the houses contained from 5 to 10 rooms, and that nearly two-thirds of the population were living in them, the average number of occupants per room being under one; while slightly over 30 per cent. of the houses contained 3 and 4 rooms, and were occupied by a little more than one-fourth of the population.

DOMESTIC SERVANTS.

The following statement shows the number of domestic servants who were employed in the various classes of households at the Census of 1901:—

Class of Household.	Total Households.		Households employing domestic servants.	
	Number.	Occupants.	Number.	Number of servants.
Private families	237,448	1,221,571	21,885	28,703
Boarding-houses	4,045	42,336	1,010	1,696
Hotels........................	3,093	35,544	2,455	6,043
Other households	822	25,652	361	942
Total	245,408	1,325,103	25,711	37,384

It is to be understood that only those domestic servants are included above who were known to be sleeping at their place of work. There were in addition, 2,902 sleeping away from their place of work on the night of the Census.

The principal feature of the above table is the number of servants employed in private families, and it will perhaps be sufficient if these only are considered, as in boarding-houses and hotels servants are more or less necessary for the proper conduct of the business. At 3,035 boarding-houses and 638 hotels apparently no servants were employed.

It will be found that in private families 2·4 per cent., in boarding-houses 4·0 per cent., and in hotels 1·7 per cent. of the total occupants were servants.

The next table distributes the servants in private families according to the number employed, and to the size of the house where they were employed :—

Number of Rooms in House.	Total Households.	Households employing specified number of Servants.					Total Households employing Servants.	Total Servants employed.
		0	1	2	3	4 and over.		
1 and 2	20,823	20,760	61	2	......	......	63	65
3 and 4	73,990	72,167	1,775	47	1	......	1,823	1,872
5 and 6	94,343	88,072	5,955	280	28	8	6,271	6,634
7 to 10	40,651	30,461	8,140	1,644	357	49	10,190	12,706
11 to 15	4,763	1,986	1,216	893	462	206	2,777	5,301
16 to 20	637	154	111	129	115	128	483	1,334
Over 20	195	33	22	30	33	77	162	619
Not stated	2,046	1,930	82	19	9	6	116	172
Total.........	237,448	215,563	17,362	3,044	1,005	474	21,885	28,703

As the houses increase in size the proportion employing servants increases, and the proportion of servants themselves increases. By far the greater number of households employ only one servant. Altogether, 9·2 per cent. of the private families employ a servant; in the Metropolis the proportion is 11·3 per cent., and in the remainder of the State 8 per cent. The number of servants employed averaged 12·1 to every 100 families in New South Wales, 14·9 to every 100 in the Metropolis, and 10·5 to every 100 in the country.

SHIPPING.

From the year 1860—just after New South Wales was restricted to its present boundaries—up to the present time, the trade and shipping returns of the State show a remarkable expansion. The rate of increase in shipping has, moreover, been much faster than that of the population, despite the checks occasioned by unfavourable seasons here, or the low prices ruling for staple products in the European markets.

The following table shows the number and tonnage of vessels arriving in and departing from New South Wales, at intervals of five years since 1860, together with the average tonnage per vessel at each period :—

Year.	Entered.		Cleared.		Average Tonnage per Vessel.
	Vessels.	Tonnage.	Vessels.	Tonnage.	
1860	1,424	427,835	1,438	431,484	300
1865	1,912	635,888	2,120	690,294	329
1870	1,858	689,820	2,066	771,942	373
1875	2,376	1,109,086	2,294	1,059,101	464
1880	2,108	1,242,458	2,043	1,190,321	586
1885	2,601	2,088,307	2,583	2,044,770	797
1890	2,326	2,340,470	2,317	2,294,911	998
1895	2,390	2,851,546	2,405	2,854,705	1,190
1900	2,784	4,014,755	2,714	3,855,748	1,432
1905	2,725	4,697,511	2,694	4,684,108	1,731

In the shipping records of New South Wales the repeated voyages of vessels are included, but no account is taken of ships of war, cable-laying vessels, and yachts, nor of vessels trading between ports in New South Wales. The tonnage quoted is net.

In 1860 the number of vessels required to conduct the trade of New South Wales was 1,424, while in 1905 the total had increased to 2,725. A more definite idea of the growth of trade is obtained, however, when it is stated that in 1860 the tonnage of the vessels that entered the ports of the State was 427,835, while in 1905 the tonnage was 4,697,511, or nearly eleven times as large. During this period the size of vessels has been constantly increasing. In the first year the average capacity of each vessel was 300 tons. In 1905 the figure was 1,731 tons, and several vessels over 10,000 tons now enter the port of Sydney regularly.

The tonnage fluctuated from year to year, but with a constant tendency to increase, until in 1905 it reached the highest figure on record. Compared with other Australian States the shipping tonnage of New South Wales greatly exceeds that of any other province, as it comprises considerably more than one-third of the total. Victoria comes next with a little over one-fifth.

NATIONALITY OF VESSELS.

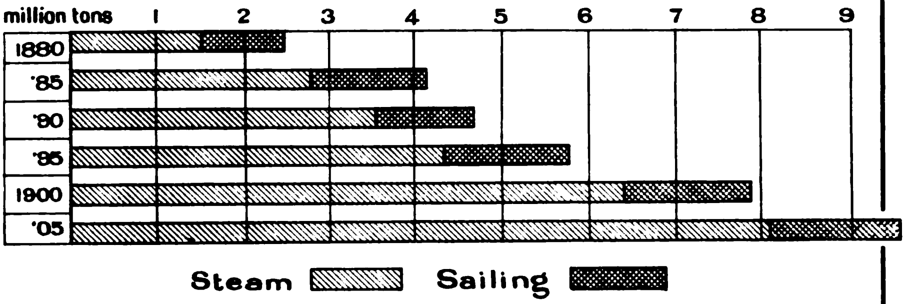
The trade of the State is, to a very large extent, carried on under the British flag, the deep-sea trade with the mother country and British possessions being in the hands of the shipowners of the United Kingdom, and the coasting trade chiefly in local hands. Since 1881, however, there has been a notable increase in foreign shipping, and at the present day the greater portion of the direct trade transacted with foreign ports is carried in vessels which are not British. This has been due to the appearance in the Australian trade of the steamers of the Messageries Maritimes in 1883, of those of the two German lines some time later, and more recently the vessels of the American and Japanese Companies. From the table given below, showing the expansion in British and foreign shipping during the last forty-five years, it will be seen that the British tonnage entered and cleared in 1860 was 689,251, or 80·2 per cent. of the total of 859,319 tons; while in 1880 the proportion was as high as 92·9, British vessels representing 2,259,924 tons out of a total of 2,432,779. In 1905, however, the British shipping had fallen to 85·6 per cent., the foreign tonnage having increased from 172,855 to 1,347,676 during the twenty-five years which have elapsed since 1880:—

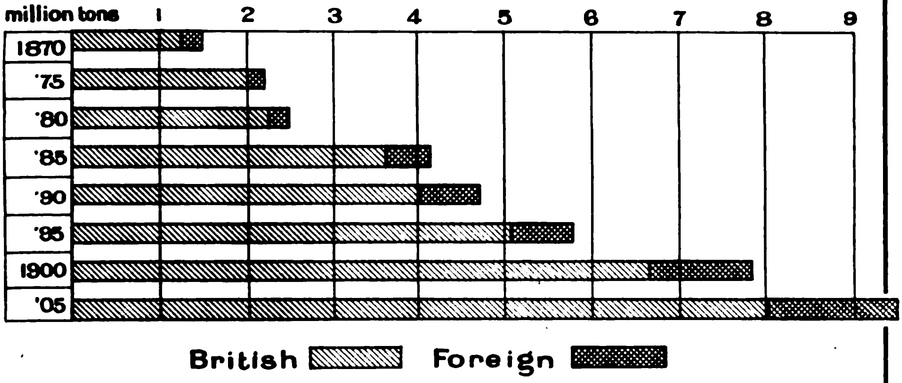
Year.	British.		Foreign.		Total.
	tons.	per cent.	tons.	per cent.	tons.
1860	689,251	80·21	170,068	19·79	859,319
1865	1,248,249	94·12	77,933	5·88	1,326,182
1870	1,333,410	91·22	128,352	8·78	1,461,762
1875	2,001,641	92·32	166,546	7·68	2,168,187
1880	2,259,924	92·89	172,855	7·11	2,432,779
1885	3,615,582	87·48	517,495	12·52	4,133,077
1890	4,030,472	86·95	604,909	13·05	4,635,381
1895	5,061,387	88·70	644,864	11·30	5,706,251
1900	6,702,106	85·15	1,168,397	14·85	7,870,503
1905	8,033,943	85·63	1,347,676	14·37	9,381,619

Of the tonnage set down as British, the larger portion is owned or registered in Australia and New Zealand. Prior to 1891 the returns do not allow of the colonial shipping being divided into that belonging to Australasia and that belonging to other British colonies, and it is only after 1900 that Australian vessels can be separated from New Zealand; but in 1870, out of 1,333,410

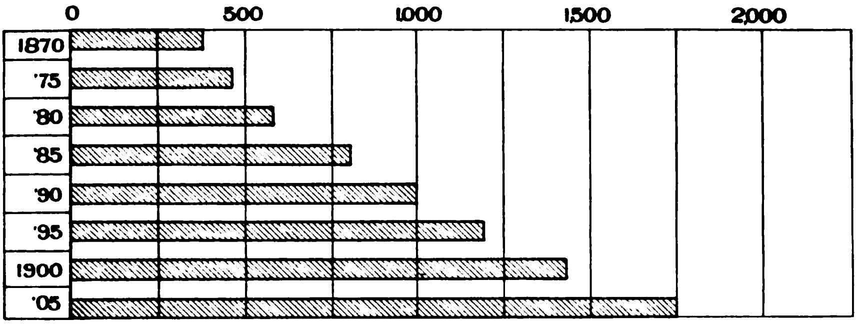
SHIPPING

Tonnage Entered and Cleared





Average Tonnage per Vessel



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tons of shipping entered and cleared under the British flag, 964,718 tons, or 72·3 per cent., belonged to British possessions, the great bulk being Australasian; in 1880, out of 2,259,924 tons of British shipping entered and cleared, 1,499,236 tons, or 66·3 per cent., belonged to British colonies; in 1900 the shipping from and to British possessions amounted to 6,702,106 tons (of which 3,590,284 tons were Australasian) out of a total 7,870,503 tons, or 53·6 per cent.; while in 1905 out of a total of 9,381,619 tons, 3,559,239, or 37·9 per cent., were Australian.

The tonnage of the foreign vessels trading with New South Wales is still small, although a great advance has been made during the last fifteen years. Taking the year 1905, for which the total tonnage of the principal nationalities is given below, Germany stands first, then France, then the United States. The only other nations whose carrying trade with the State is important are Norway and Italy.

The statement below shows the total shipping of the principal nationalities that entered and cleared the ports of New South Wales in 1890, 1900, and 1905, as well as the proportions per cent. In 1890 and 1900 New Zealand vessels are included with the Australian, and cannot be separated:—

Nationality.	Total Shipping Entered and Cleared New South Wales.						Percentage of each Nationality.		
	1890.		1900.		1905.				
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.	1890.	1900.	1905.
Australian	3,228	2,453,300	3,306	3,590,284	2,786	3,559,239	52·93	45·62	37·94
New Zealand					564	704,822			7·51
British	965	1,577,172	1,469	3,111,822	1,424	3,769,882	34·02	39·54	40·18
French	76	137,466	159	249,302	189	368,040	2·97	3·17	3·92
German	152	229,413	144	351,064	201	522,683	4·96	4·46	5·57
Scandinavian	29	22,027	111	108,749	78	111,747	·47	1·38	1·19
Italian	4	4,780	54	71,908	43	60,640	·10	·91	0·65
Japanese	....	......	48	120,208	....	......	....	1·53	....
American	161	173,770	165	193,849	120	261,590	3·75	2·46	2·79
Other Nationalities	33	37,453	43	73,322	14	22,967	·81	·93	0·25
Total	4,643	4,635,381	5,498	7,870,503	5,419	9,381,619	100·00	100·00	100·00

TRADE WITH VARIOUS COUNTRIES.

Of the tonnage engaged during 1905 in the outward trade of New South Wales, 15·2 per cent. went to the United Kingdom. The tonnage of vessels to Victoria and the other Australasian provinces, including New Zealand, amounted to 50·2 per cent. of the whole. As regards the remainder, 9·3 per cent. went to other British possessions, and 25·3 per cent. to foreign countries. The following table shows the tonnage entered from and cleared for the United Kingdom, the British colonies, and some of the principal foreign countries, but it must be borne in mind that the figures represent the nominal tonnage or cargo space of the vessels carrying the goods, and not the actual weight of the goods carried, which latter information it is impossible to obtain.

A distribution of the traffic among the leading divisions of the British Empire and the principal foreign countries with which the State of New South Wales has commercial relations will be found below :—

Country.	Entered from and cleared for various Countries.					
	1890.		1900.		1905.	
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.
British Empire—						
Australian States	2,974	2,544,905	3,662	3,861,154	2,880	4,102,126
United Kingdon	318	651,133	341	954,232	389	1,373,413
New Zealand	460	332,793	540	598,710	634	863,329
India and Ceylon	33	61,820	57	138,993	79	212,692
Hongkong	64	92,523	68	121,933	64	152,007
Canada	4	5,103	41	76,477	26	61,094
Cape Colony	12	18,744	152	240,755	66	114,660
Natal	...	....	40	60,701	32	62,911
Fiji	66	68,003	65	64,125	64	73,020
Straits Settlements	24	33,994	19	31,212	41	69,694
Other British Possessions	13	9,079	60	58,101	35	46,619
Total, British	3,968	3,818,697	4,465	6,206,393	4,310	7,131,565
Foreign Countries—						
France	25	57,096	44	100,793	54	152,751
Germany	69	133,368	70	234,817	96	329,237
Netherlands	4	4,622	3	5,062	4	7,184
Belgium	10	14,426	13	28,129	10	26,185
United States	154	222,483	157	303,187	170	419,299
China	8	10,365	19	41,161	12	26,428
Japan	4	5,150	34	83,179	98	217,020
New Caledonia	100	97,823	118	143,867	86	140,232
Java	20	26,837	45	89,129	15	34,876
Philippine Islands	14	19,323	31	44,825	81	194,872
Hawaiian Islands	...	....	94	107,248	57	90,177
Peru	15	17,676	28	37,411	54	84,003
Chili	100	115,222	211	295,829	178	315,254
Other Foreign Countries	152	92,898	166	149,473	194	212,536
Total, Foreign	675	817,284	1,033	1,664,110	1,109	2,250,054
All Tonnage	4,643	4,635,381	5,498	7,870,503	5,419	9,381,619

It will be seen from the above figures that out of a total tonnage amounting to 9,381,619 in 1905, vessels from other Australian States aggregated 4,102,126, or 43·7 per cent. of the whole. The United Kingdom furnished the next largest tonnage with 1,373,413 tons, or 14·6 per cent., followed by New Zealand with 863,329 tons, equal to 9·2 per cent. ; United States with 419,299 tons, or 4·5 per cent. ; and Germany with 329,237 tons, or 3·5 per cent. of the total. During the fifteen years—1890-1905—the tonnage of the United Kingdom increased by 722,280 tons, or 111 per cent., while British tonnage as a whole increased by 3,313,468, or 87 per cent., the United States tonnage by 196,816 tons, or 88 per cent., and the German tonnage by 195,869 tons, or 147 per cent.

The great increase in the German tonnage is due to the large volume of business captured by the heavily-subsidised vessels of the various German lines. In fact, considerable impetus has been given to all the foreign shipping trade with Australia through the subsidising of the lines by several of the foreign Governments. The North German Lloyd, for example, receives an annual subsidy from the German Government of £115,000, equal to 6s. 8d. per mile. To protect the interests of the German agriculturists it is stipulated in the agreement that the vessels shall not carry on their homeward journey frozen meat, dairy produce, or cereals in the nature of those grown in Germany. The Japanese Government subsidises its steamers trading to Australia to the extent of £50,000 per annum, and the Messageries Maritimes receives a subsidy of 8s. 4d. per mile. Of the British lines the Peninsular and Oriental receives £85,000 per annum, and the Orient–Pacific £120,000 per annum, for carrying the mails to and from Australia.

STEAM AND SAILING VESSELS.

The records prior to the year 1876 do not distinguish the steamers from the sailing vessels, but the modern tendency to supersede sailing vessels by steam has been abundantly apparent in the twenty-nine years which have since elapsed. In 1876 the steam tonnage was 912,554 as compared with 1,215,171 tons of sailing vessels, being 42·9 per cent. and 57·1 per cent. respectively. The relative positions have long since been transposed, for the tonnage of sailing ships in 1905 was only slightly higher than the figures of 1876, being 1,287,032 tons, or but 13·7 per cent. of the total shipping, as compared with 8,094,587 tons of steam, or 86·3 per cent. of the whole. The steam tonnage in 1905 was, therefore, eight times as great as in 1876. The progress of the tonnage of each class will be seen from the following table :—

Year.	Steam.		Sailing.		Proportion of Steam to Total Tonnage.	
	Entered.	Cleared.	Entered.	Cleared.	Entered.	Cleared.
	tons	tons	tons	tons	per cent.	per cent.
1876	473,821	438,733	600,604	614,567	44·10	41·65
1880	803,935	746,437	438,523	443,884	64·71	62·71
1885	1,413,551	1,378,292	674,756	666,478	67·69	67·41
1890	1,759,475	1,768,848	580,995	526,063	75·18	77·08
1895	2,132,753	2,161,176	718,793	693,529	74·79	75·71
1900	3,206,657	3,140,449	808,098	715,299	79·87	81·45
1905	4,051,884	4,042,703	645,627	641,405	86·26	86·31

The advantage offered by the New South Wales trade to shipowners is illustrated by the rather peculiar feature of the large amount of tonnage coming to the State in ballast, and the small amount leaving without cargo. A large proportion of the vessels arriving in ballast come from the ports of the neighbouring States, where they have delivered a general cargo, and, having been unable to obtain return freight, have cleared for Newcastle to load coal. The largest amount of tonnage entered in ballast in any one year since 1876 was in 1900, when it reached 1,296,833 tons. The tonnage entered and cleared in ballast for the years shown was :—

Year.	Steam (Ballast).		Sailing (Ballast).		Proportion of Ballast to Total Tonnage.	
	Entered.	Cleared.	Entered.	Cleared.	Entered.	Cleared.
	tons	tons	tons	tons	per cent.	per cent.
1876	16,709	4,022	246,244	13,834	24·47	1·70
1880	73,006	3,015	144,757	13,204	17·53	1·36
1885	146,501	11,181	198,865	42,200	16·54	2·61
1890	309,780	3,767	228,699	18,620	23·01	·98
1895	375,589	26,802	466,401	6,630	29·53	1·17
1900	791,803	133,159	505,030	1,644	32·30	3·50
1905	882,539	127,268	466,774	16,956	28·72	3·08

Although the proportion of tonnage entered in ballast fluctuated between 16·5 per cent. in 1885 and 32·3 per cent. in 1900, the tendency is for the figure to stand at about one-quarter of the whole. The tonnage cleared in ballast is very small; up to 1900 it was under 2 per cent., and is now only about 3 per cent. The reason why so small a proportion of Australian shipping clears in ballast is principally to be found in the great and varied resources of the country; for when the staple produce—wool—is not available, cargoes of wheat, coal, silver, copper, live-stock, frozen meat, butter, fruit, tallow, leather, skins and hides, and other commodities may generally be obtained. Besides, owing to the great distance of the ports of the Commonwealth from the commercial centres of the old world, vessels are not usually sent out without at least some prospect of securing a return cargo. As a rule, it does not pay to send vessels to Australasia seeking freights, as is commonly done with regard to European and American ports.

INLAND RIVER SHIPPING.

During the eighteen years 1886 to 1903 the tonnage of the vessels engaged in the trade carried on between New South Wales and Victoria and South Australia, *via* the rivers Murray and Darling, was included in the shipping returns of the State. The Customs Department, however, does not now collect the particulars, and they have therefore been excluded from the shipping records of all the years mentioned.

The number and tonnage of the vessels which entered and cleared during each year of the specified period were as follows:—

Year.	Entered.		Cleared.		Year.	Entered.		Cleared.	
	Vessels.	Tons.	Vessels.	Tons.		Vessels.	Tons.	Vessels.	Tons.
1886	260	42,798	270	35,862	1895	731	78,212	685	75,575
1887	393	65,862	398	52,778	1896	780	75,423	744	74,052
1888	315	50,766	338	37,515	1897	782	73,416	468	53,621
1889	550	67,614	454	51,545	1898	714	62,238	610	54,091
1890	563	72,777	460	53,714	1899	813	69,242	676	58,475
1891	419	69,741	446	71,018	1900	842	79,333	692	65,053
1892	473	59.852	523	61,169	1901	692	63,208	522	50,725
1893	659	73,247	638	72,448	1902	276	22,347	167	12,578
1894	843	88,627	826	88,990	1903	426	38,083	389	36,754

The trade borne by the rivers Murray and Darling varies greatly from year to year, according as they are favourable or otherwise for navigation. The Murray River is navigable during the greater part of the year, but the same cannot be said of the Darling, which as a rule can only be used by shipping during the period from March to September, when its volume is augmented by the flood waters from the interior of Queensland. The towns at which the vessels call are Wentworth, on the Darling, at its confluence with the Murray, and Moama, Swan Hill, and Euston, on the Murray.

PORTS.

No other seaport of the State can be compared with either Sydney or Newcastle, though Wollongong now maintains a trade of some consequence, especially in coal; and of late years the importance of Eden, Twofold Bay, has increased.

The progress of the shipping trade of Sydney has been very uniform, the increase from the year 1860 being at an average rate of about 5·3 per cent. per annum, and from 1890 at the rate of 5·1 per cent. per annum. The vessels registered as entered considerably exceed in tonnage those cleared at Port Jackson. To account for this it is only necessary to state that vessels leaving Sydney for Newcastle for the purpose of shipping coal are reckoned as departures from Newcastle, and not from Sydney. For this reason the clearances of Newcastle uniformly exceed the arrivals, as will be noticed in the subsequent table. The practice of clearing vessels at both ports at one time obtained, but has been abandoned for many years, and vessels are now cleared at the port which they last leave. The following statement shows the shipping entered and cleared at both Sydney and Newcastle for quinquennial periods from 1860 to 1905:—

Year.	Sydney.		Newcastle.	
	Entered.	Cleared.	Entered.	Cleared.
	tons.	tons.	tons.	tons.
1860	292,213	275,630	111,274	134,480
1865	423,570	421,049	189,620	248,769
1870	385,616	364,758	283,091	383,242
1875	590,700	468,423	510,902	573,626
1880	827,738	641,996	400,598	516,480
1885	1,608,169	1,283,888	452,946	722,865
1890	1,644,589	1,356,632	625,398	842,180
1895	2,027,951	1,669,654	727,834	1,048,400
1900	2,716,651	2,109,739	1,160,758	1,523,976
1905	3,401,013	2,922,461	1,182,267	1,586,134

The total tonnage of Sydney increased by 902,000 tons between 1860 and 1880, and by 3,357,000 tons between 1880 and 1900, while during the last five years the increase has amounted to 1,497,000 tons.

The returns for Newcastle also show a great advance, the tonnage entering having doubled during the last sixteen years. As might, perhaps, be anticipated from the nature of the trade of the two ports, a large number of sailing vessels visit Newcastle, the proportion of tonnage being over one-third. In Sydney the proportion is only about 10 per cent.

The other ports of the State are of minor importance compared with Sydney and Newcastle, the total tonnage of all of them only amounting to 114,231 entered and 175,513 cleared, or about 3·09 per cent. of the whole. In 1905 the vessels which entered Wollongong direct from places outside the State were, with one exception, all in ballast, and totalled 74,085 tons; while at Eden the shipping entered amounted to 30,772 tons. The shipping cleared at Wollongong had an aggregate tonnage of 135,193, and at Eden (Twofold Bay) 31,479. The bulk of the trade of Twofold Bay is with Tasmania.

During recent years a fairly large trade has sprung up between Brisbane and the northern rivers—Clarence, Richmond, and Tweed. In 1905 the total tonnage of vessels entered at these rivers from places beyond the State was 9,242, and of vessels cleared 7,213. The remaining ports at which shipping was recorded, and the tonnage of vessels thereat were Port Stephens, 1,016 cleared; Manning River, 258 cleared; Port Macquarie, 132 entered and 354 cleared.

SHIPPING REGISTERED.

At the end of the year 1905 there were 998 steamers and sailing vessels, representing 106,119 tons net, registered in the books of the Navigation Department, as belonging to the port of Sydney. Of these, 516 were steamers, collectively of 61,993 tons net. There were 56 steamers of 5,181 net tons, and 49 sailing vessels on the register at Newcastle, their net tonnage being 6,876. The total tonnage registered in the State was 118,176 of which, 67,174 was steam tonnage. These figures are exclusive of lighters, of which there were 160, of a total tonnage of 7,104, registered at Sydney; and 45, of an aggregate tonnage of 4,870, at Newcastle. A fee of £1 is charged for a lighter's license, which permits the boat to be employed for an indefinite period.

The total tonnage registered in New South Wales during the years shown was:—

Year.	Steamers.		Sailing Vessels.		Total.	
	No.	Tons.	No.	Tons.	Vessels.	Tons.
1870	14	1,494	50	8,349	64	9,843
1875	37	3,903	93	12,197	130	16,100
1880	20	2,159	54	7,003	74	9,162
1885	50	6,387	49	4,876	99	11,263
1890	21	4,027	28	6,234	49	10,261
1895	13	5,172	13	1,363	26	6,535
1900	23	10,445	31	4,289	54	14,734
1905	37	3,018	11	1,103	48	4,121

During the year 1905 five vessels, aggregating 2,522 tons, were sold to foreigners, and in consequence were removed from the registers of the State. Sales were also made to British subjects of 80 vessels, with a total tonnage of 6,998, which remained on the registers at Sydney and Newcastle.

The only ports at which vessels are registered are Sydney and Newcastle, and the following statement shows the number of steam and sailing vessels registered at each port on the 31st December, 1905, classified according to their tonnage:—

Tonnage.	Sydney.				Newcastle.			
	Steam.		Sailing.		Steam.		Sailing.	
	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.
Under 50	275	5,899	315	4,525	42	1,023	23	601
50 and under 100	105	7,486	90	6,913	9	629	14	981
100 ,, 200	65	9,008	29	4,045	2	217	2	244
200 ,, 300	19	4,795	14	3,420	...	......	1	235
300 ,, 400	19	6,399	11	3,956	...	......	4	1,393
400 ,, 500	9	3,918	2	895	...	......	3	1,312
500 ,, 600	9	5,055	4	2,236	1	552	...	......
600 ,, 1,000	4	3,224	10	8,520	...	......	1	657
1,000 ,, 1,400	4	4,873	5	6,020	2	2,760	...	......
1,400 ,, 1,800	6	9,502	1	1,466	...	......	1	1,453
1,800 and over	1	1,834	1	2,130	...	......	...	......
Total	516	61,993	482	44,126	56	5,181	49	6,876

CONSTRUCTION OF VESSELS.

The years 1883 and 1884 were marked by great activity in the construction both of sailing and steam vessels, 50 sailing and 52 steam vessels having been built is 1883, whilst 39 sailing vessels and 64 steamers were built in the subsequent year. Trade then became less active, and the industry showed a tendency to die out. In 1890 it had fallen lower than in any of the preceding years, and there has been little improvement since, the tonnage of sailing vessels built during 1905 being only 266, and of steamers 1,007.

Schooners and ketches are the principal classes of sailing vessels built in the State, the general tonnage of each class averaging considerably under 100 tons burden. The tendency to supplant sailing vessels by steamers, and the substitution of iron for wood for the frames and hulls of vessels, have given a check to the wooden ship-building industry, which at one time promised to grow to important dimensions.

Up to 1905 no reliable data were procurable as to the number and tonnage of vessels built abroad for the New South Wales local trade, and such vessels formed an import of large value altogether lost sight of in the Customs returns. In 1905, however, the Customs returns show that 7 vessels valued at £46,165 were imported from abroad. A further idea of the large number imported may be gathered from the registration of vessels other than those built in New South Wales. During the last five years there were 39 steam vessels of 21,966 total tonnage and 23 sailing vessels of 6,525 total tonnage registered which were not built in the State.

THE NAVIGATION DEPARTMENT.

The Navigation Amendment Act of 1899 abolished the Marine Board, and constituted a Department of Navigation and Courts of Marine Inquiry. The powers and duties of the Department and Courts were defined by this measure, and the Navigation Acts of 1871-1896 were amended to accord with the new jurisdiction.

The Navigation Department supervises all matters relating to steam navigation, and transacts all business in connection with the issue of certificates of competency; the framing of harbour regulations; the preservation of ports, harbours, rivers, &c.; the regulation of lighthouses, lights, and river-marks, moorings, licenses to lighters, watermen's boats, ferries, harbour and river steamers, &c. It controls the pilot service, and administers the rules relating to the marking of load lines, the life-saving appliances on ships, and accommodation for seamen. The Court of Marine Inquiry is presided over by a District Court Judge, and makes inquiries as to shipwrecks and other casualties affecting ships, or as to charges of incompetency or misconduct on the part of the masters, mates, or engineers of ships, either in the case of British ships on or near the coast of New South Wales, or on a ship registered in New South Wales. The court has the power to suspend or cancel certificates, and determines appeals in respect of the detention of ships alleged to be unsafe.

THE SYDNEY HARBOUR TRUST.

The Sydney Harbour Trust Act, which came into force on the 1st November, 1900, was passed in order to make better provision for the management of the port of Sydney, to establish a board of commissioners, and to confer on such body certain powers in relation to the port, including power to levy and collect certain tolls, dues, rates, rents, and charges, and to purchase and resume lands; to vest certain property in the commissioners; and for various other purposes. The three commissioners were appointed a body corporate, with perpetual succession and a common seal, each member of the board, subject to certain provisions, being entitled to hold office for seven years. The exclusive control of the port and shipping, lighthouses, beacons, buoys, wharves, docks, &c., rests with the commissioners, and the preservation and improvement of the port generally is vested in them. Power is given them to collect rates and charges in accordance with the Wharfage and Tonnage Acts and amending Acts, and all such statutes are *mutatis mutandis* incorporated with the Harbour Trust Acts, and unless otherwise provided, all rates leviable under those statutes may be collected by the Commissioners.

QUARANTINE.

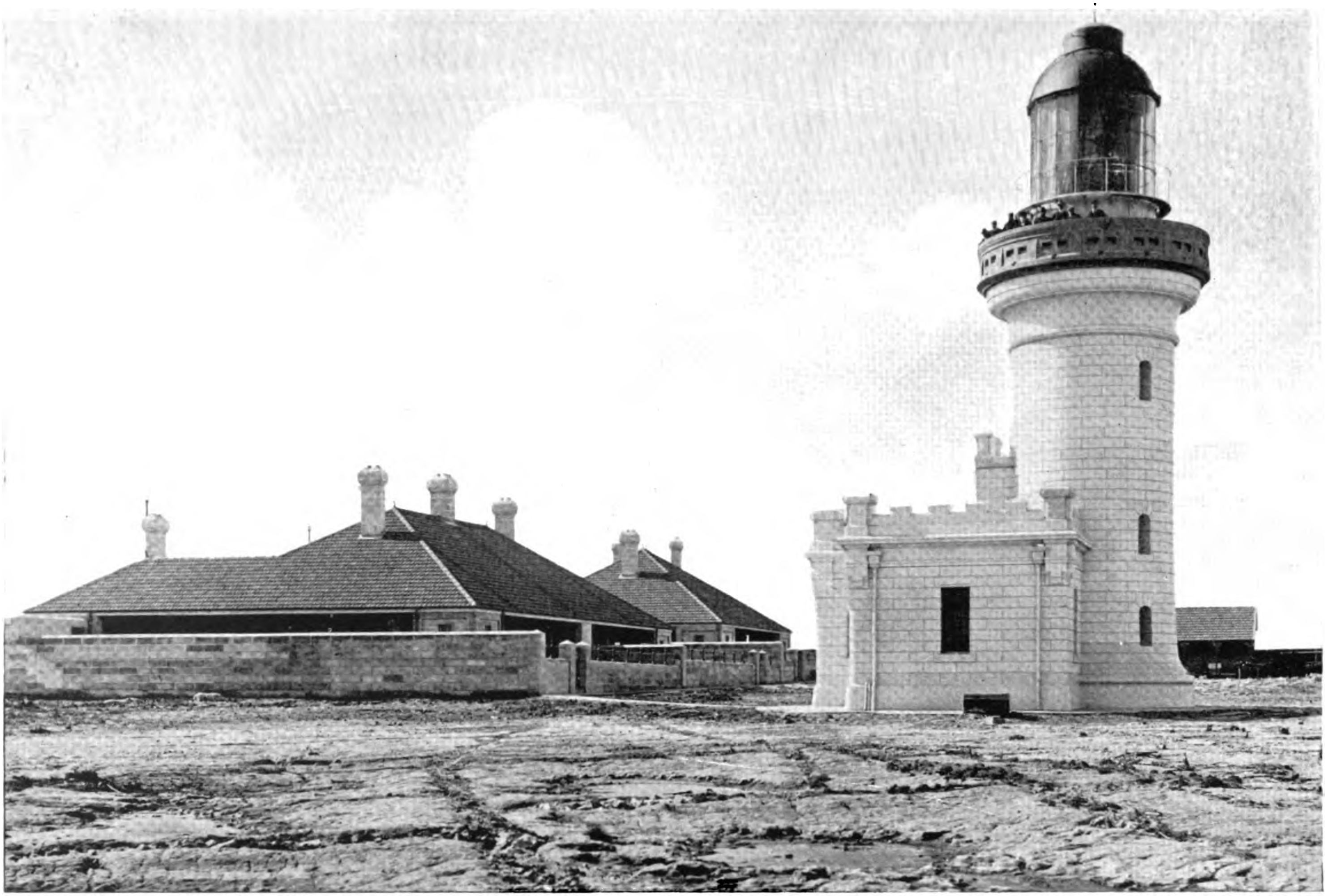
The Board of Health have entire control of all matters relating to health, and may place in quarantine any vessel, should they deem it advisable to do so for the preservation of the public safety. In the course of the year 1905 the Government Health Officers at Sydney and Newcastle examined 756 vessels, of which 146 were detained for special action. The passengers examined numbered 8,060, and the crews of the vessels, 31,603. There is only one quarantine station in the State for persons. It is situated inside the North Head of Port Jackson, and in equipment and suitability of position it is surpassed by few quarantine stations in the world. There is also a station at Bradley's Head in Sydney Harbour, and one at the port of Newcastle, where foreign live stock may be placed in quarantine; and at Randwick there is another station for the isolation of Australian stock and horses imported from other countries. The regulations for the quarantine of animals are enforced by the Stock Branch of the Department of Mines and Agriculture.

DOCKS AND WHARVES.

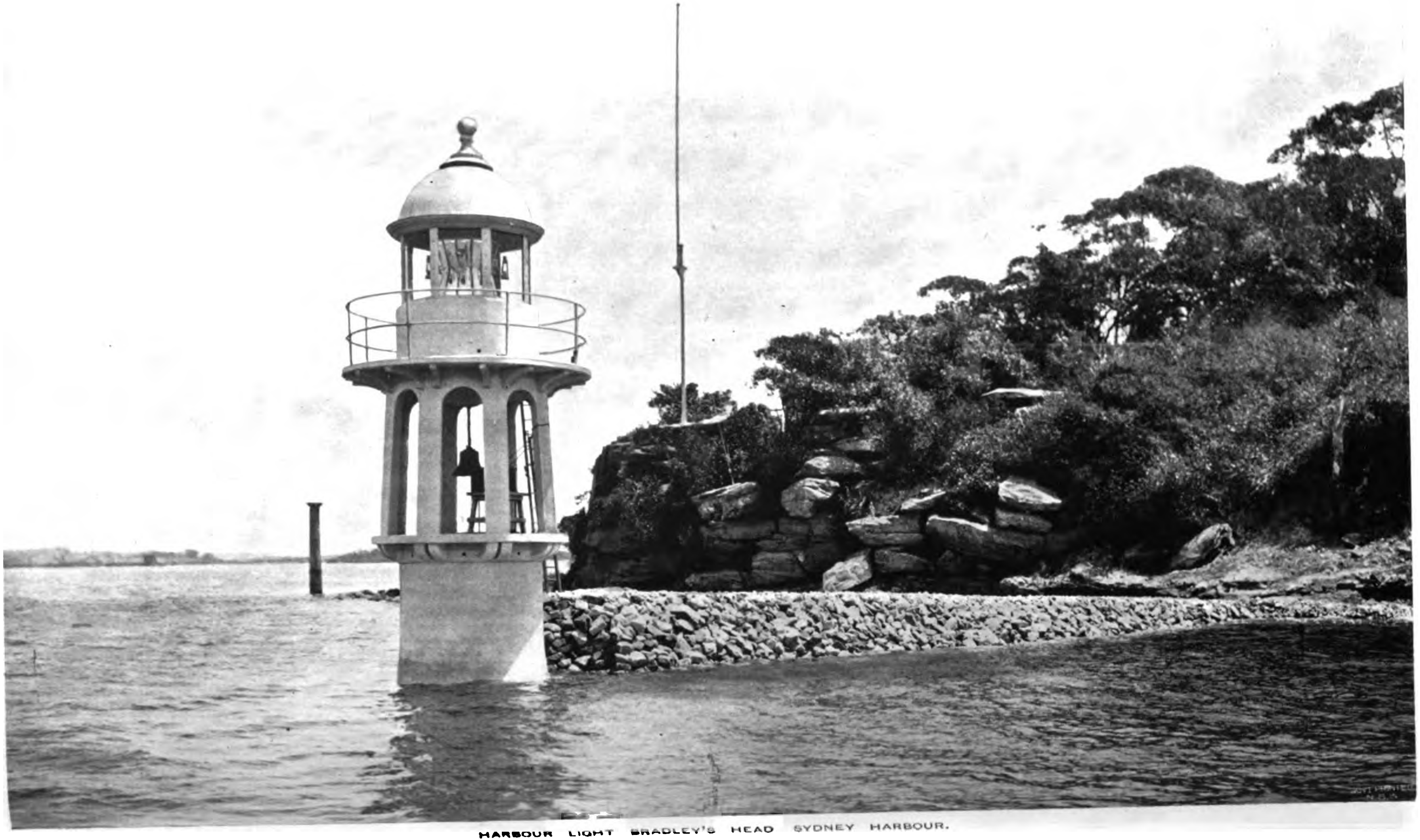
Adequate accommodation is provided both by the Government and by private enterprise for fitting and repairing ships in the State. At Sydney there are four graving docks, five floating docks, and three patent slips. At Newcastle there are three patent slips; besides which there are other docking and building yards in different parts of the State for the convenience of coasters and small craft.

The Sutherland Graving Dock at Cockatoo Island, Sydney, the property of the Government, is one of the largest single docks in the world; it is 608 feet long and 84 feet broad, and is capable of receiving vessels drawing 32 feet of water. The Fitzroy, another large Government graving dock on Cockatoo Island, is capable of receiving vessels drawing 21 feet 6 inches of water. In addition the Mort's Dock and Engineering Company own two large graving docks, one at Balmain and the other at Woolwich.

For natural facilities for shipping Sydney stands unrivalled. The water deepens abruptly from the shores, so that the largest vessels may be berthed alongside the wharves and quays. At low tide the depth of water ranges between 12 and 30 feet. Practically the whole of the wharfage at Port Jackson is now under the control of the Sydney Harbour Trust. Along the shores of Sydney Cove magnificent echelon wharves have been constructed, which are capable of berthing vessels of 14,000 tons register.



POINT PERPENDICULAR LIGHTHOUSE.



HARBOUR LIGHT BRADLEY'S HEAD SYDNEY HARBOUR.

At Pyrmont, Darling Harbour, and Woolloomooloo Bay the wharves are fitted with steam cranes and other appliances for the speedy discharge of the largest ships constructed, while elevators have been erected to facilitate the loading of wheat, and on all the jetties the railway line is laid down. Powerful shipping appliances and roomy stores, as well as electric lighting, are to be found on all the important wharves, which are extended and improved in order to keep pace with the growing shipping of the port.

Newcastle is also a well-equipped port, where vessels of 8,000 tons can be safely berthed; and every modern steam and hydraulic appliance for loading coal is found on its wharves. The Government owns nearly all the wharfage.

At the harbour of Wollongong vessels drawing 11 feet 6 inches of water can be berthed, and a large cargo shed, coal shoots, cranes, and derrick, are available for the use of shipping. Staiths, cranes, and other coal-shipping appliances have been erected at Bulli, Coal Cliff, and other places. Private as well as Government wharves are found at all the chief centres of population along the rivers of the State, and all ports with a trade of any importance have their jetties and shipping facilities.

LIGHTHOUSES.

The coast of New South Wales is well provided with lighthouses, the number at the end of 1905 being 25, besides which there were many leading lights and light-ships for the safety of harbour navigation. The Smoky Cape group-flashing light, the Macquarie revolving electric light, on the South Head of Port Jackson, and the Cape Byron group-flashing light are amongst the most powerful lights in the world, the first named being visible 28 miles at sea, and each of the last two 26 miles. In addition there are lighthouses on Point Perpendicular, visible 24 miles; Seal Rocks, visible 23 miles; and Montagu Island, visible 22 miles.

SHIPWRECKS.

The coast of New South Wales is free from any source of danger to vessels navigating it, and where reasonable precautions were taken wrecks have been very rare. There are only two lifeboat stations on the coast, one at the Sydney Heads, and the other at Newcastle; but the whale-boats at the various pilot stations have been fitted with cork linings, and otherwise made useful for the work of rescue, in which many of them have been of excellent service. The steam tugs subsidised by the Navigation Department for the towing of ships in and out of port, are also available for the purpose of rendering assistance to vessels in distress; and life-saving appliances are kept at certain places along the coast.

The wrecks reported in 1905 numbered 8, and of the persons comprising the crews and passengers, 8 lost their lives. There were 4 steam vessels and 4 sailing, while the total tonnage of the vessels was 974. The value, including cargoes of six vessels, representing 952 tons, was £22,672; but no particulars were available respecting the other two vessels.

During the last five years there have been 48 vessels wrecked on the shores of New South Wales, or otherwise within the jurisdiction of the State. Of these 30 were steam and 18 sailing vessels, the total tonnage represented being 14,202. The number of lives lost was 94, the highest number in any year being 36 in 1904.

WAGES OF SEAMEN.

The following table shows the average wages, per calendar month, in 1905, paid to white crews of British ocean-going steamers trading with New South Wales, and also the rates for white crews of steamers engaged in the Inter-state trade. The rates were obtained from the ships' articles deposited with the State shipping officers :—

Capacity.	Average monthly wages. White crews.		Capacity.	Average monthly wages. White crews.	
	Ocean-going steamers.	Inter-State steamers.		Ocean-going steamers.	Inter-State steamers.
Navigation—	£	£		£	£
1st mate	10 to 17	14 to 17	Fireman	4/10/-	8/10/-
2nd ,,	9	11 to 14	Greaser	4/10/-	8/10/-
3rd ,,	7 to 8	8 to 11	Trimmer	4	6/10/-
Boatswain	5	7/10/-	Cooking and Providoring:		
Carpenter	5½ to 7½	8	Purser	10 to 25	10
A.B. seaman	4	6/10/-	Chief cook	6 to 12	8 to 12
Ordinary seaman	2/5/-	3	2nd ,,	6	3 to 7
Engineer's Department—			Baker	7	8
1st engineer	16 to 30	18 to 27	Butcher	5	6
2nd ,,	12 to 16	14 to 19	Pantryman	4	5/10/-
3rd ,,	8 to 13	12 to 15	Attendance—		
4th ,,	8	12	Head steward	7½ to 12	8 to 12
5th ,,	7	10	2nd ,,	6	3 to 7
6th ,,	7	10	Stewardess	2/10/-	3
Winchman	5½ to 7	8½ to 9½	General servant	3	4

The rates quoted in this table are supposed to be averages, although the wages paid on the ocean-going passenger steamers are in nearly every case higher than on the cargo steamers which also carry passengers. The top rates shown are the highest paid on the passenger steamers, while the bottom rates are a fair average on the cargo steamers.

The crews of some of the British steamers trading to the State are composed partly of coloured seamen, chiefly Lascars and Chinese. In the following table will be found the average rates of wages paid to the various employees in this class :—

Capacity.	Average monthly wages.		Capacity.	Average monthly wages.	
	Lascars.	Chinese.		Lascars.	Chinese.
Navigation—	£ s. d.	£ s. d.	Cooking and Providoring:	£ s. d.	£ s. d.
1st serang (boatswain)	2 8 8	2 8 0	Bhandary (cook)	1 6 8	1 3 0
1st tindel ,, mate	1 17 4	......	Baker	2 0 0	......
2nd ,, ,, ,,	1 14 8	......	Cassub (storekeeper)	1 10 0	1 18 4
3rd ,, ,, ,,	1 12 0	......	Butcher	2 6 8	......
Secanz (helmsman)	1 17 4	......	Pantryman	1 5 0	......
Carpenter	2 17 6	......	Scullion	0 7 4	......
Winchman	1 9 4	1 18 4	Knifeman	0 17 4	......
Oilman	1 13 4	......	Icemen	0 18 8	......
Lascars (not otherwise described).	1 4 0	......	Paniwalla (water turncock).	1 10 0	......
			Attendance—		
Engineer's Department—			Waiter	1 6 8	1 18 4
Fireman	1 2 8	1 10 8	Topass (sweeper)	0 16 0	......
Trimmer	0 16 0	1 6 8	Cabin boy	0 16 0	1 8 9

COMMERCE.

The trade of New South Wales is the largest of all the States of the Australian Commonwealth, and, relatively to population, compares more than favourably with that of any other country in the world. The growth of the trade of the State during the last forty-six years will be seen from the table appended. The figures quoted represent the values as furnished by the Customs Department. As regards imports, the value represents the amount on which duty is payable or would be payable if the duty were *ad valorem*. The value of goods subject to duty is taken to be the fair market value in the principal markets of the country whence the same were exported, with an addition of 10 per cent. to such value. This addition of 10 per cent. is supposed to cover the cost of packing, insurance, freight, and all other charges. The value of goods exported is the value in the principal markets of the State in the ordinary commercial acceptation of the term. These values are verified by the customs officers with the prices ruling from day to day in the local markets :—

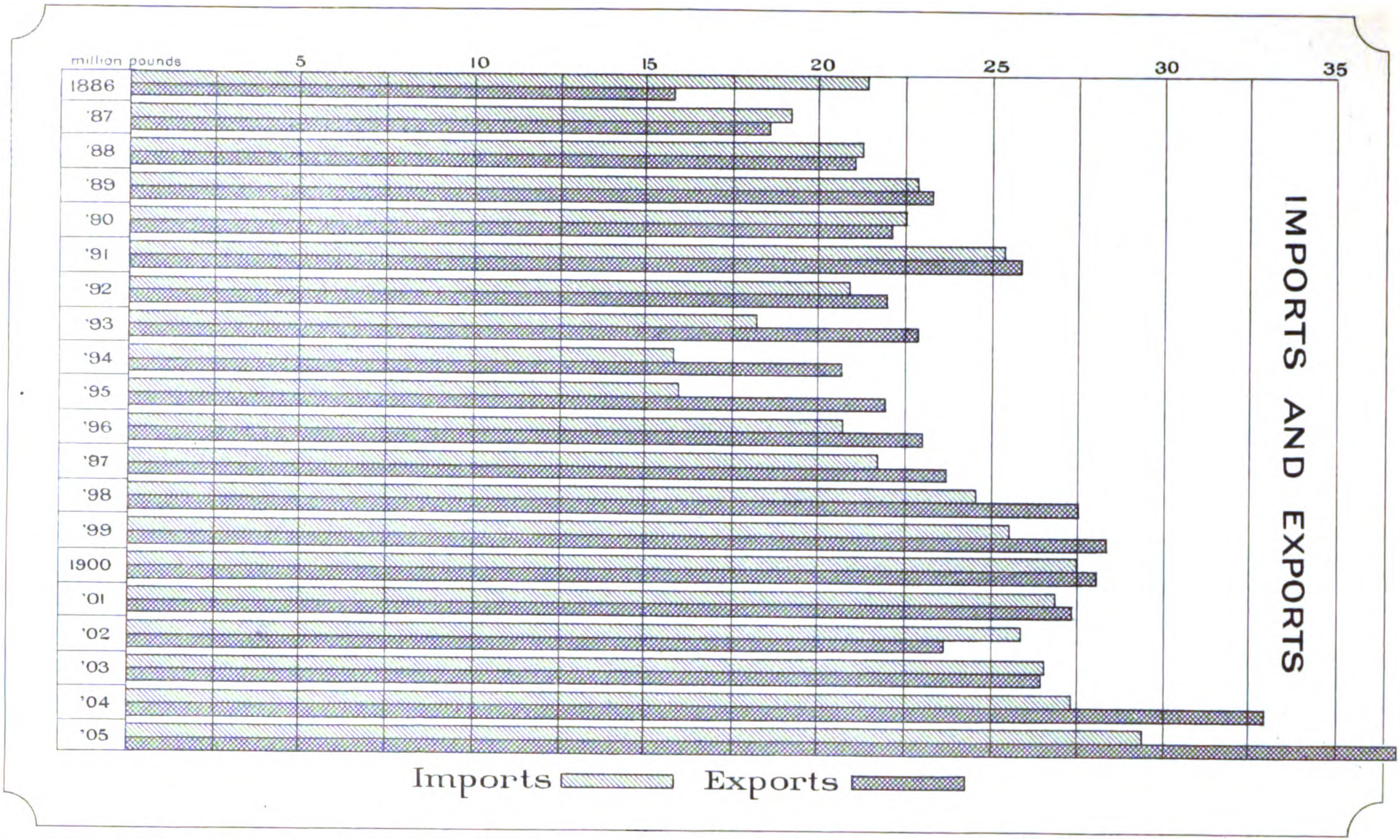
Year.	Imports (Average Annual Value).	Exports (Average Annual Value).	Total Trade.			
			Value.	Per Inhabitant.		
	£	£	£	£	s.	d.
1860–64	8,778,305	7,780,512	16,558,817	45	12	6
1865–69	8,936,766	9,473,835	18,410,601	42	3	9
1870–74	10,191,726	10,999,660	21,191,386	40	4	8
1875–79	14,399,377	13,316,609	27,715,986	43	15	4
1880–84	19,582,946	17,701,505	37,284,451	46	9	0
1885–89	21,662,848	19,040,971	40,703,819	40	13	6
1890–94	20,536,781	22,692,220	43,229,001	36	18	10
1895–99	21,669,230	24,957,958	46,627,188	36	2	0
1900	27,561,071	28,164,516	55,725,587	41	2	11
1901	26,923,218	27,351,124	54,279,342	39	11	2
1902	25,974,210	23,544,051	49,518,261	35	10	8
1903	26,770,169	26,818,059	53,588,228	37	15	0
1904	27,285,958	33,004,534	60,290,942	41	13	7
1905	29,424,008	36,757,002	66,181,010	44	15	2

The trade grew steadily in volume until the maximum point was reached in 1891. During the next fifteen years the value fluctuated, until in 1905 it reached the record figure of over £66,000,000. In 1905 the trade was worth £44 15s. 2d. per head, which value has been exceeded only in the sixties, when the population was small and prices were high, and in the eighties, which were years of heavy borrowing. The value of the exports from year to year forms the surest index of the progress of a country circumstanced like New South Wales, and the result of a rise or fall in the value of the staple commodities, or of a depression in production, may be readily traced in the corresponding rise or fall in the export values. The imports must be considered in connection with loans raised outside the State by the State and local governing bodies, as these loans reach the State in the shape of goods which are shown in the import returns. Thus 1881 to 1891, and 1899 to 1902, were years of large borrowing. In the years 1900 and 1901 also the imports underwent abnormal expansion on account of the loading-up by merchants in anticipation of the Federal tariff. Bearing these facts in mind it will be seen that the volume of trade has increased by over 50 per cent. in the last twenty years, and has more than doubled during the last thirty years.

Of the total trade shown in the above table about 40 per cent. is carried on with the other Australian States, the remaining 60 per cent. representing the direct oversea trade with countries outside Australia. For reasons that are mentioned later, the returns of interstate trade are rather misleading, and in any case under Federation the States are but parts of one country, and such distinctions are, therefore, anomalous. Similar movements are not recorded in the United Kingdom, the United States of America, or any other confederation. They were recorded when the States were separate colonies, each charging duty on goods imported from the others, as well as from outside countries. It has, however, become customary to make up these returns, and, as the information is demanded by the States, the figures are continued, and must be taken into account. They are also, to a certain extent, necessary in connection with the book-keeping provisions of the Constitution Act. Distinguishing then the imports according as they came interstate or directly oversea, the following were the values during the last twenty years :—

Year.	Imports.			Per head of Population.					
	Interstate.	Oversea.	Total.	Oversea.			Total.		
	£	£	£	£	s.	d.	£	s.	d.
1886	7,136,047	14,177,110	21,313,127	14	12	6	21	19	8
1887	8,259,959	10,911,358	19,171,317	10	17	2	19	1	7
1888	8,297,564	12,931,713	21,229,277	12	9	9	20	9	11
1889	9,452,222	13,410,835	22,863,057	12	11	6	21	8	9
1890	10,049,648	12,565,356	22,615,004	11	8	1	20	10	6
1891	10,255,756	15.127,641	25,383,397	13	4	11	22	4	6
1892	8,483,884	12,292,642	20,776,526	10	8	11	17	13	1
1893	8,139,354	9,967,681	18,107,035	8	5	8	15	1	0
1894	7,309,718	8,492,223	15,801,941	6	18	5	12	17	7
1895	6,758,140	9,234.275	15,992,415	7	7	8	12	15	9
1896	8,855,161	11,706,349	20,561,510	9	4	3	16	3	8
1897	8,975,428	12,768,922	21,744,350	9	17	11	16	17	0
1898	11.721,033	12,732,527	24,453,560	9	14	0	18	12	8
1899	10,869,159	14,725,156	25,594,315	11	0	10	19	3	10
1900	10,164,080	17,396,991	27,561,071	12	16	11	20	7	0
1901	9,367,824	17,560,394	26,928,218	12	16	0	19	12	6
1902	10,949.675	15.024,535	25,974,210	10	15	7	18	12	9
1903	12,792,252	13,977,917	26,770,169	9	16	6	18	16	4
1904	14,152,101	13,133,857	27,285,958	9	1	0	18	17	3
1905	14,938,885	14,485,123	29,424,008	9	15	11	19	18	0

The figures shown in this table for 1904 and 1905 are not quite on the same basis as the previous years, when the oversea imports should be increased and the interstate imports decreased by a corresponding amount on account of transhipments. Until September, 1903, it was the practice of the customs office to ignore transhipments, so that goods which arrived from a country outside Australia at any Australian port, and were thence transhipped to New South Wales, were recorded as an import from the State where they were transhipped, and not as they ought to have been, as an oversea import. It is impossible now to ascertain the value of these transhipped goods, but it is believed to have ranged each year between £500,000 and £1,000,000. Another alteration in its methods by the Customs Department in 1904 was, that goods of Australian produce sent from another State to New South Wales for transhipment abroad, were recorded first as an interstate import, and next, as an oversea export. Previously they were not



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recorded at all. The greater part of these goods comes from Queensland and Tasmania, and although it is not possible to estimate their value, it is considerable, as will be seen when it is stated that in 1904 it amounted to £2,652,285, and in 1905 to £3,090,972. It is therefore apparent that in comparing those two with previous years the two factors just mentioned should be taken into consideration. However, taking the figures in the table as they stand, it will be seen that the highest point, so far as the oversea imports are concerned, was reached in 1885, in fact all the later eighties were years of heavy imports owing to the borrowings by the State. In 1891 the imports averaged £22 4s. 6d. per head; but from that year the values per head of population steadily declined until 1895, when they touched the lowest point on record since the State was restricted to its present boundaries, thirty-five years before. The falling-off was due to two chief causes—first, to the large diminution in public and private borrowings; and, second, to the fall in prices, which has extended to nearly all the commodities that the State imports. In 1896, however, the value rose to £16 3s. 8d. per head, and the improvement continued until 1900, after which it declined down to 1904. In 1905 there was a very considerable improvement.

The next statement shows the exports in the same years as in the preceding table, also distinguishing the interstate and oversea movements:—

Year.	Exports.			Per head of Population.					
	Interstate.	Oversea.	Total.	Oversea.			Total.		
	£	£	£	£	s.	d.	£	s.	d.
1886	7,278,223	8,439,714	15,717,937	10	2	9	16	4	3
1887	8,692,387	9,829,363	18,521,750	9	15	8	18	8	8
1888	9,221,327	11,698,803	20,920,130	11	5	11	20	4	0
1889	10,324,221	12,970,713	23,294,934	12	3	3	21	16	10
1890	10,990,593	11,055,344	22,045,937	10	0	8	20	0	2
1891	11,323,131	14,620,889	25,944,020	12	16	1	22	14	4
1892	8,631,618	13,340,629	21,972,247	11	6	8	18	13	4
1893	9,347,776	13,573,447	22,921,223	11	5	7	19	1	0
1894	7,473,562	13,104,111	20,577,673	10	13	7	16	15	5
1895	7,104,812	14,829,973	21,934,785	11	17	2	17	10	9
1896	7,945,243	15,065,106	23,010,349	11	17	2	18	2	2
1897	7,788,633	15,962,439	23,751,072	12	7	5	18	8	1
1898	8,162,415	19,485,702	27,648,117	14	16	11	21	1	4
1899	8,859,646	19,585,820	28,445,466	14	13	9	21	6	7
1900	9,979,190	18,185,326	28,164,516	13	8	7	20	15	11
1901	9,140,504	18,210,620	27,351,124	13	5	5	19	18	8
1902	7,568,909	15,975,142	23,544,051	11	9	3	16	17	11
1903	7,876,898	18,941,161	26,818,059	13	7	0	18	17	9
1904	9,918,050	23,086,484	33,004,534	15	19	3	22	16	4
1905	12,263,472	24,493,530	36,757,002	16	11	4	24	17	2

It will be understood from what has just been said that the exports prior to 1904, to be strictly comparable with that year, require to have the oversea movement increased by the value of goods sent from other States to New South Wales for transhipment abroad. On the other hand, such goods sent from New South Wales to other States were formerly reckoned among the oversea exports, but are now included with the interstate. The present practice of counting such goods as being exported from the place where they are actually placed on board oversea vessels has been in force since the 1st September, 1903, and was adopted so as to avoid the confusion that might arise from a continuance of the former practice, and the possibility of transhipments being treated as oversea exports both at the place of production and the place of final export.

From the above table it will be seen that the exports in 1905 were the highest for the whole period dealt with, both absolutely and relatively, being higher than in 1904, which previously was the best year. In 1891 the figures were high, but the returns were increased on account of large shipments of wool which were held over from the preceding year on account of maritime strikes. The years showing out most unfavourably were 1886, 1894, and 1902, all of which were influenced by adverse seasons or falling prices.

Judged by the volume of its exports per inhabitant, New South Wales compares favourably with any other country whose commerce is at all considerable, as an export of from £16 to £25 can only be paralleled by some few countries, such as Belgium, whose trade is largely made up of re-exports. The following table affords a comparison of the trade of New South Wales with that of the other Australian States and the principal British possessions and foreign countries. The figures represent the average annual value during the last three years:—

Country.	Total Trade.	Value per Inhabitant.
	£	£ s. d.
New South Wales	60,020,000	41 9 0
Victoria	42,377,000	35 0 7
Queensland	17,399,000	33 5 7
South Australia	16,322,000	44 0 7
Western Australia	16,797,000	71 3 6
Tasmania	5,791,000	32 8 8
New Zealand	28,108,000	33 5 3
United Kingdom	932,548,000	21 15 10
Cape Colony	55,069,000	22 17 5
Canada	87,548,000	16 0 10
German Empire	541,240,000	9 9 7
Belgium	282,463,000	41 11 2
France	448,423,000	11 10 1
Switzerland	131,115,000	39 6 8
United States of America	475,028,000	6 2 4
Mexico	28,130,000	2 0 8
Argentine	55,486,000	11 19 11
Japan	54,600,000	1 4 1

It will be seen from the above that of the Australian States, Western Australia and South Australia have a greater trade in proportion to population than New South Wales, which might be expected when it is remembered that Western Australia is a large gold-producing State with a small population, and that South Australia has a large re-export trade in the products from the Broken Hill silver-mines. The trade of New South Wales per inhabitant exceeds that of all British possessions, and of foreign countries, except Belgium, which has a large re-export and transit business. In all the above countries, except the Argentine, the re-export trade is included. If the re-export trade is excluded in the case of Belgium and Switzerland, the values per head are reduced by about £15 in each case.

BALANCE OF TRADE.

New South Wales is a debtor country, and its trade is affected by the imports of capital and the payments of interest due thereon. In former years the annual imports of capital, both on public and private account, were large, and exceeded the necessary payments of interest, so that the balance of trade showed an excess of imports. Of late years capital has still been imported, but in smaller amounts not equal to the interest payments, so that the exports since about 1892 have been the greater. The interest to be provided annually by New South Wales on public loans, State and municipal, is about £2,400,000, and it is estimated that, in addition there is a further sum of about £3,500,000 sent away as earnings on private investments and income of absentees, making a total annual charge of nearly six millions at the present time. The following is a statement of the balance of trade for each of the last twenty years:—

Year.	Excess of Exports or Excess of Imports (—).	Year.	Excess of Exports or Excess of Imports (—).
	£		£
1886	(—) 5,595,190	1896	2,448,839
1887	(—) 649,567	1897	2,606,722
1888	(—) 309,147	1898	3,194,557
1889	431,877	1899	2,851,151
1890	(—) 569,067	1900	603,445
1891	560,623	1901	422,906
1892	1,195,721	1902	(—) 2,430,159
1893	4,814,188	1903	47,890
1894	4,775,732	1904	5,718,574
1895	5,942,370	1905	7,332,994

During the last twenty years the balance of trade has been against the State five times. In the first year there was heavy borrowing by the Government, and also in 1902. The years 1900 and 1901 were affected by the large imports in anticipation of the Federal tariff. In 1905 the excess of exports amounted to over 7¼ millions sterling, this large balance being due to the very much increased production from primary industries during the year, together with increased prices, so that it was again possible as in 1904 to send away a large amount to reduce past indebtedness, and also to hold in London.

ARTICLES OF IMPORT.

In order to show as clearly and concisely as possible the nature of the goods imported into New South Wales, those brought into the State during 1905 have been classified under certain leading heads, as shown in the table below. A distinction has been made between produce of any of the Australian States, and produce of British and foreign manufacture:—

Articles of Import.	Australian Produce.	British and Foreign Produce.	Total Imports.
Food, Drink, Narcotics, and Stimulants—	£	£	£
Animal food	443,606	204,905	648,511
Vegetable food	2,124,310	482,477	2,606,787
Drinks—alcoholic	81,893	537,658	619,551
,, non-alcoholic	5,573	5,869	11,442
Tobacco and other narcotics	103,786	245,244	349,030
Other stimulants and condiments	72,554	591,543	664,097
	2,831,722	2.067.696	4,899,418
Live Animals and Plants—			
Animals of all kinds	1,497,136	36,079	1,533,215
Plants	8,487	31,912	40,399
	1,505,623	67,991	1,573,614
Textile Fabrics, Dress, and Manufactured Fibrous Materials—			
Silk manufactures	....	270,598	270,598
Woollen manufactures	65,774	894,953	960,727
Cotton and flax manufactures	1,922	1,192,306	1,194,228
Manufactures of mixed materials	2,772	844,337	847,109
Dress	486,858	1,422,136	1,908,994
Manufactures of fibrous materials	28,744	374.415	403,159
	586,070	4,998,745	5,584,815
Products of Arts and Manufactures, n.e.i.—			
Books and stationery and paper	73,664	655,206	728,870
Musical instruments	4,897	116,342	121,239
Works of art and art materials	13,499	49,158	62,657
Fancy goods	8,787	165,476	174,263
Timepieces, jewellery, and plated ware	74,320	430,963	505,283
Surgical and scientific instruments	464	105,238	105,702
Metal manufactures, including machinery	272,514	2,298,757	2,571,271
Harness, vehicles, and equipment	32,483	195,552	228,035
Ships, boats, and equipment	1,745	47,078	48,823
Building materials	32,902	98,749	131,551
Furniture	54,687	105,951	160,638
Arms and explosives	8,862	251,929	260,791
Drugs, chemicals, and by-products	44,847	426,833	471,680
Glass and earthenware manufactures	13,941	184,434	198,375
Soap, candles, and paint	42,824	257,846	300,670
Other manufactures, n.e.i	91,047	400.264	491,311
	771,383	5,789,776	6,561,159
Staple Animal and Vegetable Substances, including Mineral Oils—			
Animal subetances	1,813,731	258,740	2,072,471
Vegetable substances	101,313	656,956	758,269
Oils	16,437	329,458	345,895
	1,931,481	1,245,154	3,176,635
Staple Minerals and Metals, including Specie and Bullion—			
Specie and bullion	3,388,058	983,392	4,371,450
Iron and steel	2,021	528,537	530,558
Other metals	1,595,893	152,179	1,748,072
Coal and shale	1,972	644	2,616
Stone, clay, and other minerals	729,810	51,612	781,422
	5.717,754	1,716,364	7,434,118
Indefinite articles	12,387	181,862	194,249
Total Imports	13,356,420	16,067,588	29,424,008

From this table it will be seen that nearly one-half of the imports comprises goods the produce of other Australian States. The whole of this, however, is not for local consumption. Gold bullion is imported for purposes of coinage, and is then re-exported. Merchandise to the value of £2,368,634, mostly in the shape of staple products, was in transit to be transhipped to countries beyond the Commonwealth; while other raw staple products, especially animal and vegetable substances and minerals, after being slightly worked up, were eventually re-exported abroad. Goods of British and foreign production to the value of £1,582,465 were re-imported from other Australian States.

The principal articles retained for local consumption were those in the class comprising the products of arts and manufactures, n.e.i. By far the the largest item in this class is metal manufactures, which includes machines and machinery; then came books, stationery, and paper; timepieces and jewellery; drugs and chemicals; soap and candles; and arms and explosives. The class comprising textile fabrics and dress came second, and included dress, cotton, woollen and mixed manufactures as the largest items. After these the largest class was that including articles of food and drink, of which vegetable food was the largest, then tea and other stimulants and condiments, followed by alcoholic drinks. The class containing staple minerals and metals was the largest of all, but this as well as that comprising staple, animal, and vegetable substances, included many articles mostly intended for re-export. Turning to individual articles imported for consumption, the principal importations were as follows:—

Article.	Value.	Article.	Value.
	£		£
Ale and beer	151,626	Grain and pulse—*continued.*	
Apparel and soft goods—		Barley and malt	69,221
Apparel and attire, n.e.i.	1,131,642	Rice	83,756
Cosies, cushions, &c.	62,090	Harness and saddlery	58,234
Curtains	29,594	Hats and caps	243,928
Frillings, trimmings, &c.	59,659	Hay and chaff	139,743
Gloves	75,672	Hops	40,980
Piece goods	2,676,492	Indiarubber manufactures	76,323
Sewing silks, &c	124,064	Jams and jellies	56,715
Arms, ammunition, and explosives	260,791	Jewellery and precious stones	361,811
Bags and sacks	325,929	Leather	204,705
Bags, baskets, &c.	34,840	Matches and vestas	73,834
Bicycles and motors	94,300	Meats—	
Blankets	55,279	Bacon and ham	88,146
Books and stationery	320,949	Preserved	46,436
Boots and shoes	290,978	Milk, preserved	80,169
Brushware	58,925	Metals and machinery—	
Candles	34,217	Cordage, metal	30,818
Canvas	84,147	Cutlery	53,063
Carpets	54,353	Implements, agricultural	264,025
Cocoa and chocolate	73,380	Iron and steel	530,558
Coffee and chicory	30,629	Machines and machinery	826,168
Confectionery	73,424	Machine tools	50,218
Cordage and twines	65,686	Metals, manufactures of	883,302
Drugs and chemicals	260,917	Platedware	71,641
Alkalies	42,520	Rails, &c., for railways	53,351
Medicines	131,770	Oils	345,895
Earthenware	49,735	Onions	57,424
Eggs	37,752	Paints and colours	124,590
Electrical materials	90,222	Paper	392,538
Fancy goods	106,110	Pianos	82,448
Fish, all kinds	105,947	Pickles	42,269
Floorcloths	106,375	Pipes, smoking	36,023
Fruits—		Potatoes	383,976
Dried	114,406	Salt	51,975
Fresh	332,995	Soap	58,921
Fresh vegetables	51,410	Spirits	394,270
Preserved	57,990	Starch	35,272
Furniture	116,126	Sugar	752,640
Glass	41,658	Tea	373,870
Glassware	75,563	Timber	514,012
Grain and pulse—		Tobacco, &c.	349,530
Maize	70,607	Watches and clocks	71,531
Oats	106,574	Wicker and wood manufactures	55,121
Prepared flour	68,572	Wine	73,330

The import of apparel and soft goods represents £2 16s. 8d. per head of population; metal manufactures, including machinery and iron and steel, £1 17s. 4d. per head; vegetable food, £1 15s. 3d. per head; books, stationery and paper, 9s. 10d. per head; intoxicants, 8s. 5d. per head; timber 6s. 11d. per head; tea, 5s. 1d. per head; narcotics, 4s. 9d. per head; boots and shoes, 3s. 11d. per head; hats and caps, 3s. 4d. per head; harness, vehicles, &c., 3s. 1d. per head; and furniture, 1s. 7d. per head of population.

A study of these items suggests the scope which exists for the cultivation of products, especially vegetable products, now imported, and the great room for expansion in the manufacturing industries.

EXPORTS OF DOMESTIC PRODUCE.

The exports from New South Wales consist chiefly of goods produced or manufactured in the State, the re-exports of extra-Australian produce being comparatively small.

Under the present conditions of development in the State, the export of domestic produce is a very fair indication of its progress in productive pursuits. The value of the domestic exports in 1905 was nearly two and a half times as great as in 1886; and, speaking generally, the expansion during the intervening period of twenty years has been of a steady character. Wool constitutes the largest item of domestic export, and any fluctuation in the production or market value of the staple is plainly marked in the whole trade. The highest value prior to 1885 was reached in 1883, when the export of commodities of domestic produce was valued at £15,625,835. In 1885 there was a sharp fall in the price of wool and staples generally, to the extent of about 12 per cent., while there were further losses due to a succession of dry seasons. The exports of produce other than that of the State also show a decline about this period, ascribable in part to the causes which affected the general exports, and to the establishment of direct communication between Great Britain and Queensland and Tasmania; but the lost ground has been more than recovered. It may be well to explain that the apparently abnormal increase in the value of produce, other than domestic, exported during 1898 was entirely due to the large export of gold coin during that year:—

Year.	Domestic Produce exported.			Other produce Re-Exported, including Gold.
	Gold.	Commodities.	Total.	
	£	£	£	£
1860-64	8,275,407	20,785,535	29,060,942	9,841,618
1865-69	4,011,327	31,841,272	35,852.599	11,596,579
1870-74	3,492,628	37,919,502	41,412,130	13,586,172
1875-79	2,276,585	46,452,700	48,729,285	17,853,760
1880-84	1,853.038	65,491,703	67,344,741	21,162,787
1885	71,539	11,987,741	12,059,280	4,690,827
1886	24,918	11,558,311	11,583,229	4,134,708
1887	34,184	14,206,128	14,240,312	4,281,438
1888	165,540	15,516,852	15,682,392	5,237,738
1889	321,731	17,378,662	17,700,393	5,594,541
1890	137,169	17,095,556	17,232,725	4,813,212
1891	1,296,093	19,789,619	21,085,712	4,858,308
1892	11,486	17,695,616	17,707,102	4,265,145
1893	25,885	17,068,328	17,094.213	5,827,010
1894	325,302	15,579,659	15,904,961	4,672,712
1895	1,063,558	15,372,652	16,436,210	5,498,575
1896	1,699,549	15,043,142	16,742,691	6,267,658
1897	1,725.940	15,331,603	17,057,543	6,693,529
1898	1,750,747	15,976,320	17,727,067	9,921,050
1899	1,301,665	17,920,189	19,221,854	9,223,612
1900	1,330,249	17,543,239	18,873,488	9,291,028
1901	381,055	19,534,829	19.915,884	7,435,240
1902	517,038	16,731,456	17,248,494	6,295,557
1903	877,953	17,867,799	18,745,752	8,072,307
1904	718,490	21,978,280	22,696,770	10,307,764
1905	762,058	27,277,608	28,039,666	8,717,336

It should be explained that the value of export of domestic produce in 1904 and 1905 depends upon an estimate. Owing to the manner in which the Customs Department now records the Interstate movements of goods, it is not possible to ascertain the value of any State's own produce exported to the other

States—it is all combined as Australian produce. It has, therefore, been necessary to estimate the interstate export of New South Wales produce, but it is believed that the figure quoted is substantially correct, as the bulk of such goods is produced in the exporting State.

The value of New South Wales produce exported in 1905 was the highest on record, and relatively to population it has been exceeded only twice during the last twenty years, this satisfactory result being due to increased production and high prices. Prior to 1905 the year 1891 had shown the highest value. The table just given shows a notable rise in the value of domestic produce exported during 1889, which was well sustained until 1893. This may be attributed in the first place to a fortunate succession of good seasons, and in the second to the production of silver, which became an important article of export in the year named. The large decrease in 1894 is fully accounted for by the fall in prices, the depression preventing such increased production as would have had the effect of sustaining the total export value. In 1895 and 1896 there was a further slight fall, although the average price of the commodities produced in the State was higher than in 1894; but although prices in 1897 were not so good as in 1896, the value of the domestic exports was greater, not only in the total amount, but in the average per head of population. The recovery in prices from 1898 onwards enabled the exports of domestic produce to show a decided increase on the values of the previous years, although 1902 and 1903 were affected by decreased production on account of adverse seasons. In the chapter on "Food and Prices" will be found the price levels of exports since 1860, showing that prices since 1884 have fallen by about 30 per cent.

In the presentation of these figures it will be seen that the value of commodities has been separated from that of gold, although in dealing with the exports of the Australian States, gold should be reckoned a commodity as much as wool, wheat, or any other article.

Below will be found the value of the trade per inhabitant, the subdivision being the same as that adopted in the previous table :—

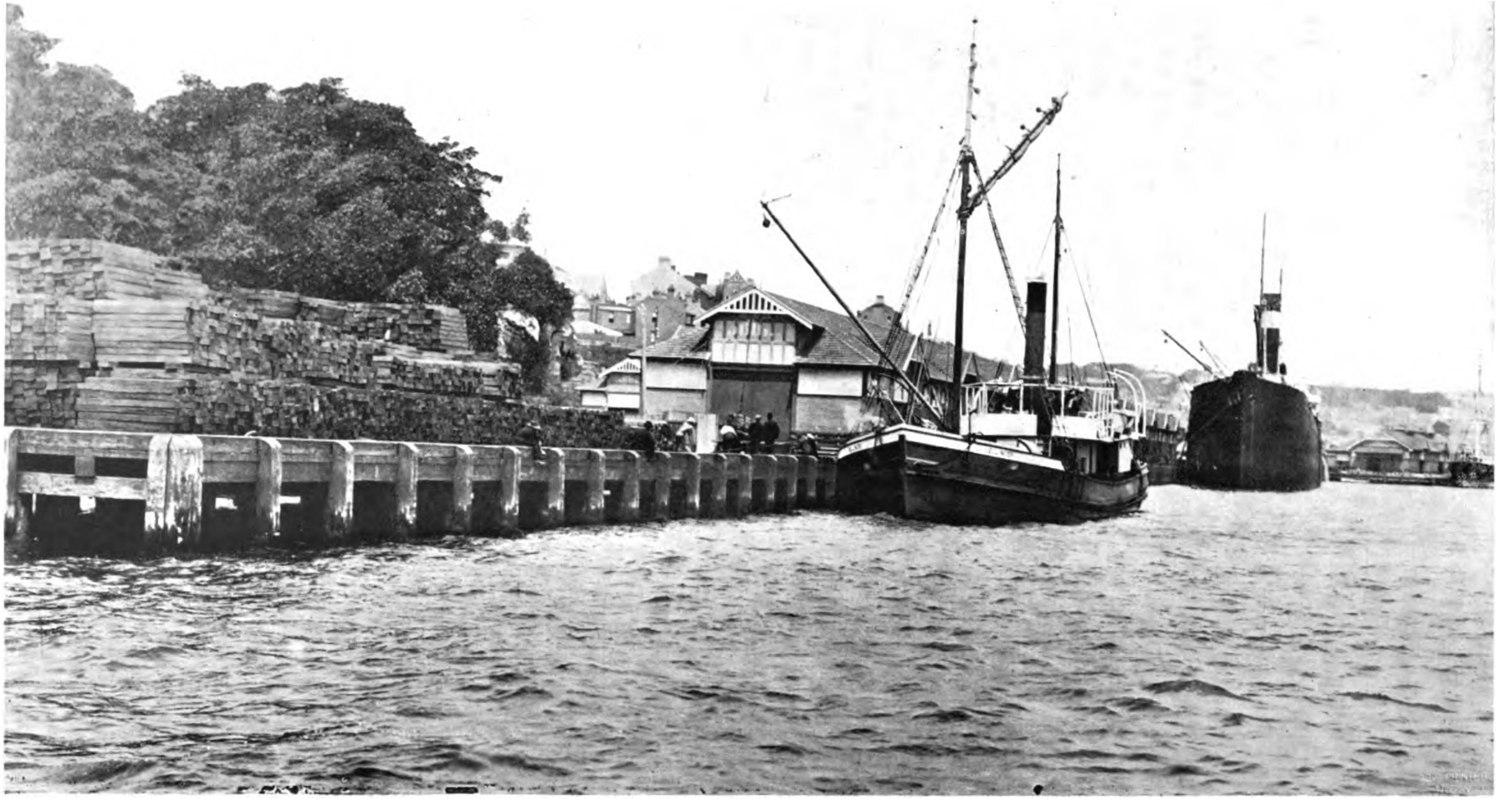
Year.	Domestic Produce Exported.			Other Produce Re-exported, including Gold.
	Gold.	Commodities.	Total.	
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1860–64	4 11 2	11 9 1	16 0 3	5 8 6
1865–69	1 16 9	14 11 10	16 8 7	5 6 4
1870–74	1 6 6	14 8 0	15 14 6	5 3 0
1875–79	0 14 5	14 13 5	15 7 10	5 12 9
1880–84	0 9 3	16 6 4	16 15 7	5 5 5
1885	0 1 6	12 18 6	13 0 0	5 1 2
1886	0 0 6	11 18 6	11 19 0	4 5 3
1887	0 0 8	14 2 9	14 3 5	4 5 3
1888	0 3 2	14 19 8	15 2 10	5 1 2
1889	0 6 0	16 5 11	16 11 11	5 4 11
1890	0 2 6	15 10 4	15 12 10	4 7 4
1891	1 2 8	17 6 7	18 9 3	4 5 1
1892	0 0 3	15 0 8	15 0 11	3 12 6
1893	0 0 5	14 3 9	14 4 2	4 16 10
1894	0 5 4	12 13 11	12 19 3	3 16 2
1895	0 17 0	12 5 10	13 2 10	4 7 11
1896	1 6 9	11 16 9	13 3 6	4 18 8
1897	1 6 9	11 17 8	13 4 5	5 3 9
1898	1 6 8	12 3 5	13 10 1	7 11 2
1899	0 19 6	13 8 9	14 8 3	6 18 4
1900	0 19 8	12 19 1	13 18 9	6 17 2
1901	0 5 7	14 4 9	14 10 4	5 8 5
1902	0 7 5	12 0 1	12 7 6	4 10 4
1903	0 12 4	12 12 0	13 4 4	5 13 6
1904	0 9 11	15 3 10	15 13 9	7 2 6
1905	0 10 4	18 8 11	18 19 3	5 17 11

It will be plain from these figures that in spite of the large and increasing amount which the State owes to its outside creditors, and the great fall in prices previously referred to, the export of domestic produce available to pay for imports shows very little diminution. The annual payments of interest on outside indebtedness—State and private—now amount to over £4 per head.

As a country manufacturing for export New South Wales has not yet achieved any position worth mentioning. So many channels have been presented for the successful employment of capital that little attention has been bestowed upon the possibility of New South Wales supplying other countries with its own manufactures; but as these outlets of capital are closed, the vast possibilities of the country in other directions will doubtless be recognised. The following table shows the nature of the domestic exports from New South Wales during 1905, the classification being similar to that adopted for the imports. The exports are divided into those to other Australian States and to oversea countries, those to other Australian States depending on an estimate as previously explained:—

Articles of Domestic Produce Exported.	To other Australian States.	To Countries Oversea.	Total.
Food, Drink, Narcotics, and Stimulants—	£	£	£
Animal food	268,182	1,537,259	1,805,441
Vegetable food	646,456	1,123,616	1,770,072
Drinks—alcoholic	25,547	12,982	38,529
,, non-alcoholic	10,028	616	10,644
Tobacco and other narcotics	175,798	664	176,462
Other stimulants	10,505	635	11,140
	1,136,516	2,675,772	3,812,288
Live animals	2,097,349	137,515	2,234,864
Plants	21,273	12,609	33,882
	2,118,622	150,124	2,268,746
Textile fabrics, dress, and manufactured fibrous materials	272,798	22,492	295,290
Products of arts and manufactures, n.e.i.	588,688	196,549	785,237
Staple Animal and Vegetable Substances, including Mineral Oils—			
Animal substances	2.583,834	11,572,949	14,156,783
Vegetable substances	34,762	320,482	355,244
Oils	7,411	116,068	123,479
	3,487,493	12,228,540	15,716,033
Staple minerals and metals	2,894,276	1,991,872	4,886,148
Specie and bullion	291	1,339,271	1,339,562
Indefinite articles	11,647	5,242	16,889
Total	9,648,845	18,390,821	28,039,666

Out of the amount £9,648,845 shown above as exported to other Australian States, considerably more than half was for export oversea, representing the value of wool sent from the Riverina and Western divisions of New South Wales to Victoria and South Australia, silver-lead ore and concentrates sent from Broken Hill to South Australia, and other staple products—agricultural, pastoral, and mineral—sent to both States. By far the larger portion of the exports consists of raw materials, which are all practically produced for export abroad. The following table shows during the last three years the quantities and values of the principal articles of New South Wales produce



LOADING SLEEPERS.

exported direct to countries beyond the Commonwealth, and it will be apparent how the export trade depends on the production from primary industries, and is affected by the variation in prices :—

Articles Exported Oversea.	Quantity.			Value.		
	1903.	1904.	1905.	1903.	1904.	1905.
				£	£	£
Wool .... lb.	154,429,335	178,347,962	210,275,585	7,276,283	7,653,304	10,067,590
Leather	....	....	....	245,697	203,351	323,776
Tallow...................... cwt.	112,151	227,480	365,706	136,568	244,160	418,234
Skins and hides	....	....	....	387,327	323,791	669,012
Meats, all kinds	....	....	....	300,498	420,482	917,171
Butter...................... lb.	8,508,776	20,549,960	14,418,676	326,939	779,257	614,224
Wheat ....bushel	109,752	8,952,627	4,517,575	16,622	1,399,390	761,437
Flour .... ton	1,339	21,592	34,292	14,359	168,942	252,647
Gold, bullion .... oz.	226,919	186,507	184,717	836,535	718,486	762,048
Copper, ingots and matte.... cwt.	175,059	153,048	170,402	478,372	436,533	572,477
„ ore .... „	31,168	41,535	1,831	21,695	41,631	1,204
Silver, bullion .... oz.	117,014	1,121,402	272,988	18,044	121,102	33,710
Silver-lead, bullion.......... cwt.	369,862	584,741	555,979	318,761	556,073	543,513
„ ore.............. „	1	401,563	318,139	1	131,206	119,023
Silver contained in matte.... oz.	948,069	....	164,582	97,257	....	18,506
Spelter and concentrates..... cwt.	7,801	245,135	203,790	2,731	37,430	38,306
Lead, pig .... „	53,428	117,665	4,210	29,583	65,964	2,657
Tin, ingots .... „	32,909	42,497	37,709	209,037	264,584	264,840
„ ore.................... „	10,325	11,441	14,259	27,702	47,494	61,475
Coal and coke .... ton	1,982,105	1,542,657	1,942,447	1,002,479	728,559	796,806
Timber, dressed and undressed	....	....	....	211,621	170,869	311,851

It will be understood that the figures in the above table represent the direct exports only. In almost every case, and especially for wool and silver-lead, the real exports would appear very much larger if the Interstate transfers in transit were added.

The relative importance of these articles will be seen from the following statement, which is based on the experience of the three years in the above table, and which shows the proportion per cent. of the value of the export of each article to the total oversea export of domestic produce :—

Article.	Proportion per cent.	Article.	Proportion per cent.
Wool	54·0	Copper	3·4
Leather	1·7	Silver and Lead	4·6
Tallow	1·7	Tin	1·9
Skins and Hides........................	2·9	Coal	5·5
Meat......................................	3·5	Timber	1·3
Butter	3·7	All other articles......................	5·1
Wheat and Flour	5·7		
Gold..	5·0		100·0

Wool is the great staple export of the State, and comprises over one-half of the value of the domestic exports. A marked feature of the wool trade is the growing disposition of buyers on the Continent of Europe to purchase their supplies direct from the State instead of obtaining them through the London brokers. Year by year the representatives of foreign manufacturers who visit Sydney for the purpose of attending the wool sales become more numerous. A little more than twenty years ago all the wool destined for Europe may be said to have found its way to London, while in 1905 the shipments of the staple of local growth to Belgium, France, Germany, and Italy amounted to 142,244,492 lb., valued at £6,715,396. A direct trade with the Continent is desirable, and its growth will be seen from the following table, giving at intervals since 1881 the destination of the wool exported, and the proportion taken by each country:—

Country.	Value.				Proportion.			
	1881.	1891.	1901.	1905.	1881.	1891.	1901.	1905.
	£	£	£	£	per cent	per cent	per cent	per cent
United Kingdom	4,062,766	5,741,350	3,853,008	3,082,835	98·9	74·9	51·9	30·6
Belgium	3,933	1,019,614	874,012	1,154,596	·1	13·3	11·8	11·5
Germany	898	407,924	1,238,492	2,278,897	·0	5·3	16·7	22·7
France	....	409,553	1,295,274	3,159,484	....	5·3	17·5	31·4
United States	40,098	88,981	39,159	148,624	1·0	1·2	·5	1·5
Other Countries—Oversea	20	3,038	120,174	233,154	·0	·0	1·6	2·3
Total	4,107,715	7,670,460	7,420,119	10,057,590	100·0	100·0	100·0	100·0

It will be observed that since 1881 the wool exported to the United Kingdom has decreased from 98·9 to 30·6 per cent. France and Germany both show proportionate increases throughout the whole period, rising from nothing in 1881, to 31·4 per cent. for France, and 22·7 per cent. for Germany in 1905.

The other products of the pastoral industry, leather, tallow, and skins and hides, form an export of considerable value and amount to 6 per cent. of the total.

Shipments of the principal minerals are also made on an important scale. Coal forms one of the staple exports of New South Wales, the quantity shipped beyond the Commonwealth in 1905 reaching 1,940,229 tons, valued at £792,751. The largest quantity exported in any year was in 1903, when it amounted to 1,955,191 tons.

The export of silver, silver-lead, and ore has become important since 1884, the value for 1893 amounting to £3,031,720, although, in consequence of the great fall in the price of the metal, due to the closing of the Indian mints and the stoppage of purchases by the United States Government, the value of the export greatly declined, being only £1,704,055 in 1898. The year 1900, however, witnessed a revival in production, and in 1905 the value of the export was £949,254. Extensive development has taken place in the copper-mining industry within recent years, the export of the mineral of local production increasing from £197,814 in 1896 to £580,929 in 1905. Twenty years ago the industry contributed about half a million to the exports of the State; but there was a steady decline from 1883 to 1894, when the value of the shipments of locally-produced copper was only £63,617. The satisfactory prices realised of late years have had a stimulating effect on the industry, and a similar cause accounts for the increase in the production of tin, the exports of which rose from £68,546 in 1896 to £90,482 in 1899 and to £328,371 in 1905. It should be explained that the amounts just quoted as the exports of silver-lead, copper, and tin, include the quantities transferred to other States, as practically the whole of these were for export abroad.

RE-EXPORT TRADE.

The re-export trade of the State increased considerably until 1889, but during the next few years a marked decline was experienced. In 1895, however, an improvement was manifested, and this has continued. The shipping facilities of Sydney at one time attracted to the port a large amount of trade from New Zealand, Queensland, and the South Seas, for transhipment to Europe; but the establishment of direct communication between those countries and Europe checked to some extent the expansion of the re-export trade.

The total value of the re-exports of the State will be found on reference to the previous tables showing the values, absolute and per head of population, of domestic exports and re-exports. Gold, consisting largely of Queensland and New Zealand metal coined at the mint and shipped by the banks to London, the United States, and the East, forms a large proportion of the trade, while there is also a large re-export of wool, chiefly the produce of Queensland. In addition there is a fairly large trade in provisions and manufactured articles of British and foreign production with New Zealand, New Caledonia, Fiji, and other islands of the Pacific. The following table shows the value of the principal articles of other than domestic produce re-exported during 1905, grouped under similar heads as the domestic exports on page 314. The goods are distinguished according as they are the produce of other Australian States or the produce of British and foreign countries :—

Articles Re-Exported.	Australian Produce.	Other Produce.	Total.
	£	£	£
Food, Drink, Narcotics, and Stimulants—			
Animal food	161,498	37,134	198,632
Vegetable food	386,130	116,902	503,032
Drinks—alcoholic	3,840	91,910	95,750
,, non-alcoholic	55	692	747
Tobacco and other narcotics	807	80,468	81,275
Tea and other stimulants	6,007	151,487	157,494
	558,337	478,593	1,036,930
Live animals	1,938	9,645	11,583
Plants	2,195	3,963	6,158
	4,133	13,608	17,741
Textile fabrics, dress, and manufactured fibrous materials	32,638	635,866	668,504
Products of arts and manufactures, n.e.i.	59,408	1,140,206	1,199,614
Staple Animal and Vegetable Substances, including Mineral Oils—			
Animal substances	1,447,420	46,215	1,493,635
Vegetable substances	2,924	35,067	37,991
Oils	5,480	63,092	68,572
	1,547,870	1,920,446	3,468,316
Staple minerals and metals	1,745,823	78,541	1,824,364
Specie and bullion	1,380,539	966,944	2,347,483
Indefinite articles	1,455	21,047	22,502
Total	5,238,157	3,479,179	8,717,336

Of the Australian produce £863,249 was re-exported to other States, and £4,374,908 oversea; while of the "other" produce £1,751,378 was sent to other Australian States, and £1,727,801 to countries oversea.

Amongst raw commodities the principal articles re-exported are tallow, skins and hides, tin, and wool; while the manufactured articles are chiefly apparel and soft goods, metal manufactures, iron and steel, machinery, drugs and chemicals, books and stationery, boots, beer and spirits, tobacco, cigars and cigarettes, and also large quantities of provisions.

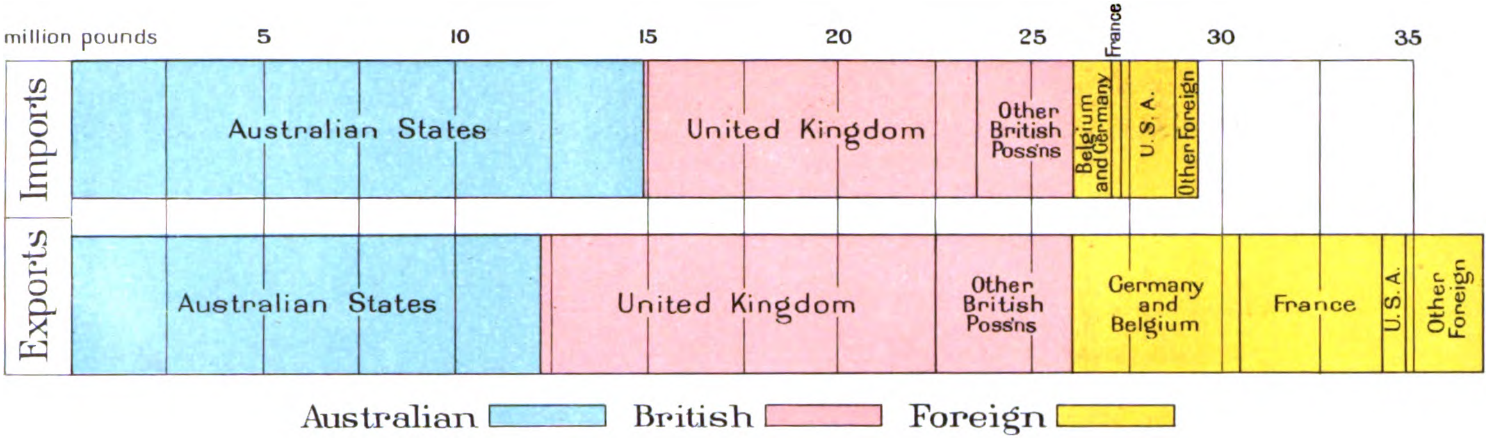
TRADE WITH VARIOUS COUNTRIES.

The trade of the State with the United Kingdom is greater than with any other country. At the same time it must be remembered that the real trade with the United Kingdom is not shown, because on the one side foreign goods are sent to Australia through London, and on the other a large portion of the exports from New South Wales to Victoria and South Australia is eventually shipped to the United Kingdom. The following statement shows the total trade of New South Wales during 1905 with the principal countries :—

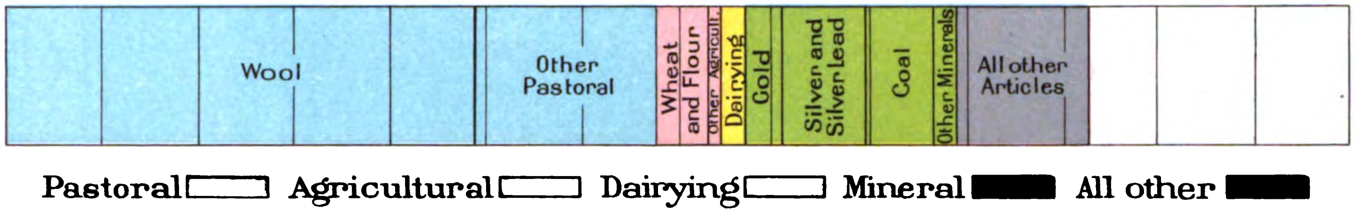
Country.	Imports.	Exports.	Total Trade.
	£	£	£
Australian States	14,938,885	12,263,472	27,202,357
United Kingdom	8,602,288	10,222,422	18,824,710
British Possessions—			
Canada	73,443	41,520	114,963
Hong Kong	89,351	424,460	513,811
India and Ceylon	717,948	1,330,189	2,048,137
New Zealand	1,369,001	934,661	2,303,662
South Africa	5,254	371,727	376,981
Straits Settlements	82,830	70,991	153,821
Others	110,399	335,121	445,520
	25,989,399	25,994,563	51,983,962
Foreign Countries—			
Belgium	222,994	1,787,163	2,010,157
China	28,631	318,159	346,790
France	138,028	3,570,246	3,708,274
Germany	864,289	2,771,396	3,635,685
Italy	73,757	176,770	250,527
Japan	145,257	377,451	522,708
New Caledonia	18,399	135,446	153,845
Norway	25,026	....	25,026
Philippine Islands	27,854	183,853	211,707
South Sea Islands	77,265	107,806	185,071
United States	1,636,069	602,145	2,238,214
Others	177,040	732,004	909,044
	3,434,609	10,762,439	14,197,048
Total	29,424,008	36,757,002	66,181,010

The statement represents the direct trade with the countries specified, irrespective of whence the goods originally came or where they ultimately go. It is impossible to trace the exports to their ultimate destination, but, so far as the imports are concerned, the Customs Department now records the countries of origin of the goods, that is to say, the countries where the goods were actually produced or manufactured. The next statement affords a comparison of the imports during 1905, according

TRADE WITH PRINCIPAL COUNTRIES _ 1905



PRINCIPAL ARTICLES DOMESTIC EXPORT _ 1905



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to the countries whence they were directly shipped, and according to the countries of origin. In each case the proportions of each to the total imports are attached :—

Country.	Direct Imports.	Origin of Imports.	Proportion per cent.	
			Direct Imports.	Origin of Imports.
	£	£		
Australian States	14,938,885	13,364,646	50·77	45·42
United Kingdom	8,602,288	8,066,621	29·24	27·41
British Possessions—				
Canada	73,443	112,187	0·25	0·38
Hong Kong	89,351	28,808	0·31	0·10
India and Ceylon	717,948	803,232	2·44	2·73
New Zealand	1,369,001	1,331,819	4·65	4·53
Straits Settlements	82,830	44,789	0·28	0·15
Others	115,653	129,060	0·39	0·44
	25,989,399	23,881,162	88·33	81·16
Foreign Countries—				
Belgium	222,994	104,011	0·76	0·35
China	28,631	118,462	0·10	0·40
France	138,028	625,707	0·47	2·13
Germany	864,289	1,233,783	2·94	4·19
Italy	73,757	78,854	0·25	0·27
Japan	145,257	175,674	0·49	0·60
Norway	25,026	107,069	0·09	0·36
South Sea Islands	77,265	86,118	0·26	0·29
Switzerland	1,433	121,983	......	0·42
United States	1,636,069	2,356,737	5·56	8·01
Others	221,860	534,448	0·75	1·82
	3,434,609	5,542,846	11·67	18·84
Total	29,424,008	29,424,008	100·00	100·00

During the year Australian produce to the value of £8,226 was re-imported from outside the Commonwealth, and extra Australian produce to the value of £1,582,465 was re-imported from the other states. The table shows that there were fairly considerable differences in the case of the United Kingdom, Hongkong, Belgium, France, Germany, and the United States, and smaller differences in the case of all the countries, between the direct imports and those according to country of origin, and the differences would be larger still if it were not that the totals for countries of origin are increased on account of goods re-imported from other States during the year. According to the direct imports about 29 per cent. of the total was received from the United Kingdom, 8 per cent. from British possessions, and 12 per cent. from foreign countries, whereas, in reality, the proportion of British goods imported was 27 per cent., and of foreign goods 19 per cent., the proportion of those the produce of British possessions being unaltered.

The table below shows in quinquennial periods since 1860, the volume of imports divided under the four heads, Australian States, the United Kingdom, British possessions, and Foreign countries :—

Period.	Imports from—				Total Imports.
	Australian States.	United Kingdom.	British Possessions.	Foreign Countries.	
	£	£	£	£	£
1860–64	13,545,569	20,434,652	3,925,407	5,985,897	43,891,525
1865–69	16,099,827	16,110,316	6,629,998	5,843,688	44,683,829
1870–74	20,812,068	20,207,644	5,369,547	4,569,373	50,958,632
1875–79	29,386,218	31,705,686	4,914,799	5,990,184	71,996,887
1880–84	32,592,680	48,726,544	7,092,661	9,502,846	97,914,731
1885–89	40,837,186	48,279,604	8,134,224	11,063,225	108,314,239
1890–94	44,238,360	41,293,833	6,943,513	10,208,197	102,683,903
1895–99	47,175,625	37,123,060	7,775,602	16,271,863	108,346,150
1900–04	57,426,119	43,118,128	10,147,402	23,827,977	134,519,626
1905............	14,938,885	8,602,288	2,448,226	3,434,609	29,424,008

If these figures be stated as proportions of the total imports the following results are obtained :—

Period.	Australian States.	United Kingdom.	British Possessions.	Foreign Countries.	Total.
1860–64	30·86	46·56	8·94	13·64	100
1865–69	36·03	36·05	14·84	13·08	100
1870–74	40·84	39·65	10·54	8·97	100
1875–79	40·81	44·04	6·83	8·32	100
1880–84	33·29	49·76	7·24	9·71	100
1885–89	37·70	44·57	7·51	10·22	100
1890–94	43·08	40·22	6·76	9·94	100
1895–99	43·54	34·26	7·18	15·02	100
1900–04	42·69	32·06	7·54	17·71	100
1905............	50·77	29·24	8·32	11·67	100

The imports have continually increased except between 1890 and 1894, the years of the financial crisis. During the last fifteen years the imports from the United Kingdom with minor variations have been practically constant and are now over one million per annum less than twenty years ago. On the contrary the imports from foreign countries have been continually increasing, and are now over two and a half millions per annum higher than during 1885-89. This diversion of trade is rather remarkable, but is probably more apparent than real. Twenty years ago the ships which now trade direct between Australia and Europe and America were either just beginning to run or were not running at all, and goods were sent to Australia through London to a greater extent than is now the case. So far as the proportions are concerned, the Australian States and the United Kingdom have practically changed places. Since 1874 the proportion of imports from British possessions has hardly varied, but of late years the proportion of imports from foreign countries has increased materially.

The next table shows the exports from New South Wales under the same heads and for the same periods as in the preceding tables, and a careful consideration of the figures will show that the changes in the exports have been very similar to those in the imports:—

Period.	Exports to—				Total Exports.
	Australian States.	United Kingdom.	British Possessions.	Foreign Countries.	
	£	£	£	£	£
1860–64	16,825,178	10,510,501	9,908,962	1,657,919	38,902,560
1865–69	20,608,087	16,347,330	9,204,936	1,208,825	47,369,178
1870–74	24,463,181	24,192,274	4,371,568	1,971,279	54,998,302
1875–79	30,984,181	28,976,662	4,214,291	2,407,911	66,583,045
1880–84	37,167,523	39,964,529	5,449,726	5,925,747	88,507,525
1885–89	42,083,242	37,727,437	4,508,809	10,885,370	95,204,858
1890–94	47,766,714	39,358,695	4,742,725	21,592,966	113,461,100
1895–99	39,862,835	43,203,489	6,137,642	35,585,823	124,789,789
1900–04	44,483,581	40,732,026	14,441,677	39,224,800	138,882,084
1905	12,263,472	10,222,422	3,508,669	10,762,439	36,757,002
	Proportion per cent.				
1860–64	43·25	27·02	25·47	4·26	100
1865–69	43·51	34·51	19·43	2·55	100
1870–74	44·48	43·99	7·95	3·58	100
1875–79	46·53	43·52	6·33	3·62	100
1880–84	41·99	45·15	6·16	6·70	100
1885–89	44·20	39·63	4·74	11·43	100
1890–94	42·10	34·69	4·18	19·03	100
1895–99	31·94	34·62	4·92	28·52	100
1900–04	32·03	29·33	10·40	28·24	100
1905	33·36	27·81	9·55	29·28	100

The exports show a similar tendency to the imports, that is to say, they have increased constantly from period to period. The exports to the United Kingdom have been stationary during the last twenty-five years, and relatively, the proportion has fallen from 45 to 28 per cent. Both absolutely and relatively the exports to foreign countries have increased constantly; in fact the proportion of goods now sent to the United Kingdom and foreign countries hardly differs. The reason is similar to that given regarding the imports, namely, the opening up of direct communication with the various countries, and also to the fact that gold is now shipped direct to those countries on account of the United Kingdom. The exports to British possessions more than doubled during the last five years, and at first sight this might seem curious, but the explanation is that there have been heavy shipments of gold and silver to India and Ceylon.

TRADE WITH AUSTRALIAN STATES.

It has already been stated that the records of Interstate trade are to a certain extent misleading. The outward Interstate transfers in particular are now worth very little. In 1904 records of outward Interstate transfers were abolished, and the only manner in which the exports from any State to the other States could be obtained, was by the reverse method of taking the imports into the other States as the exports from that State. Consequently the values of the Interstate imports and exports are identical, and do not take into account freight, insurance, &c. The export values are therefore too high, the average excess being perhaps as much as 10 or 15 per cent. Moreover, such movements as those of live stock between New

South Wales and Queensland and South Australia are reckoned as trade, and again both the imports and exports are increased by including goods which pass through the State and are subsequently shipped to countries outside Australia, chiefly the United Kingdom. Altogether, of the total Interstate trade, considerably more than one-half is only nominal. However, taking the figures for what they are worth, the following table shows the total value of the imports from and exports to each State into and from New South Wales at intervals since 1870:—

State.	1870.	1880.	1890.	19	1905.
IMPORTS.					
	£	£	£	£	£
Victoria	1,153,695	2,187,119	2,097,259	3,396,782	3,932,531
Queensland	1,767,974	2,224,421	5,482,452	4,631,384	6,809,505
South Australia	366,480	690,407	2,036,492	1,439,528	2,570,070
Western Australia	144	......	830	147,908	413,484
Tasmania	90,827	383,106	432,615	548,478	1,213,295
Total	3,379,120	5,485,053	10,049,648	10,164,080	14,938,885
EXPORTS.					
	£	£	£	£	£
Victoria	2,583,552	4,578,867	5,386,553	3,977,828	5,476,662
Queensland	680,301	1,362,262	1,670,465	1,918,903	2,541,786
South Australia	350,247	830,256	3,700,124	3,259,530	3,099,190
Western Australia	......	1,104	17,811	445,974	674,432
Tasmania	26,555	81,484	215,674	376,979	471,402
Total	3,640,655	6,853,973	10,990,627	9,979,214	12,263,472

The trade between New South Wales and the other States has increased constantly since 1870, and shows special expansion between 1880 and 1890, owing to the opening up of the Broken Hill silver mines about 1884. Practically the whole of the trade of Broken Hill passes through South Australia, and increases the volume of trade credited to it. South Australia also receives credit for large quantities of wool sent from the Western districts of New South Wales for transhipment oversea. The decline after 1890 was due to the fact that the pastoral industry was affected by unfavourable seasons and lower prices, and Broken Hill also by lower prices for its minerals. The largest trade of all the States is with Victoria, although Queensland is not far behind. A great part of the Riverina and south-western districts of the State trades almost exclusively with Melbourne. Included in the Queensland, West Australian, and Tasmanian figures is gold sent to Sydney for coinage, while movements of live stock are included in all the States—Queensland being most largely affected in each case. There are also included the re-exports of British and foreign produce from State to State.

The chief value of the Interstate records now is to show how the trade of the State has been affected by Federation, as since 1901 the old State tariffs have been abolished, and trade between all the States is free. The New South Wales markets were practically free to the other States before Federation. The following statement shows for each of the years 1903, 1904, and 1905 the value of the imports of Australian produce from the other States into New South Wales, and the value of New South Wales produce exported to the other States. The first year fully affected by the operations of the Federal Tariff was 1903.

The articles exchanged between New South Wales and the other States are many, and only those are shown in the statement which were probably intended for consumption. The export figures for 1904 and 1905 are partly estimated for reasons already explained.

Article.	Australian Produce imported from other Australian States.			New South Wales Produce exported to other Australian States.		
	1903.	1904.	1905.	1903.	1904.	1905.
	£	£	£	£	£	£
Butter	125,735	93,009	203,588	58,160	59,746	93,931
Cheese	27,889	16,331	17,817	4,394	4,192	8,863
Eggs	37,851	41,726	36,250	978	684	2,041
Fish—all kinds	16,091	14,269	11,305	3,282	5,407	3,930
Meats—						
Bacon and ham	32,945	51,700	86,250	10,666	20,224	24,527
Frozen beef	14,781	8,196	1,498	1,051	641	1,590
,, mutton	10	252	......	3,000	8,525	39,734
Extract of	1,838	1,136	9,237	230	900	406
Preserved	42,913	27,686	44,524	44,479	64,303	71,170
Milk—						
Preserved & Concentrated	5,006	9,116	11,066	1,969	4,875	3,357
Biscuits	4,616	10,294	10,544	22,103	34,853	39,045
Confectionery	15,324	26,010	35,265	8,953	8,552	9,972
Fruits—dried	43,492	56,106	54,985	109	1,045	1,408
fresh	258,861	252,583	319,258	95,237	82,132	97,394
Vegetables—fresh	49,777	35,312	50,714	2,947	5,431	6,025
Grain—Maize	43,221	39,503	68,736	1,123	753	7,373
Oats	98,635	59,113	84,450	5,290	2,580	1,937
Grain, prepared—						
Flour	152,672	59,461	64,912	141,546	135,447	130,005
Malt	83,193	79,637	57,170	3	17	49
Bran, pollard, and sharps	23,122	12,087	21,550	16,968	13,431	30,899
Hay and chaff	554,796	75,032	139,667	6,027	7,098	8,161
Jams and jellies	59,026	49,967	54,862	21,289	25,633	34,871
Linseed cake	331	228	121	10,066	8,439	11,872
Onions	28.840	31,326	46,620	348	740	2,326
Potatoes	207,338	133,624	331,720	1,848	7,394	33,418
Sugar	512,367	569,404	618,075	......	......	......
Ale and beer	30,634	25,062	21,711	6.323	5,461	6,026
Spirits—Brandy	14,851	15,894	16,249	12	687	819
Wine, Fermented, N.E.I.	33,026	35,856	35,656	7,934	7,599	8,835
Aerated waters	4,371	4,566	4,193	11,458	11,600	9,710
Tobacco—Manufactured	43,960	66,022	68,841	111,682	85,151	93.300
Cigarettes	5,724	8,130	9,615	264,714	67,390	75,384
Cigars	15,479	21,219	22,482	719	2,623	3,312
Hops	16,966	20,286	16,215	......	......	......
Pickles	7.385	6,389	7,205	4,775	6,164	7,924
Salt	25,809	32,619	34,923	......	914	......
Blankets	7,185	15,915	25,854	604	1,797	2,397
Woollens	38,786	35,563	37,363	2,399	4,517	5,676
Apparel and attire	130,361	207,139	257,432	49,683	76,152	90,893
Umbrellas, parasols	5,675	5,282	6,524	8,603	10,385	9,355
Boots and shoes	124,777	171,280	175,270	54,027	93,819	105,509
Hats and caps	28,297	34,244	37,627	13,745	19,164	23,810
Cordage, fibrous	22,568	23,588	27,303	17,266	19,945	20,189
Books	7,180	11,431	12,580	3,654	9,892	14,799
Paper	13,846	11,104	11,876	9,248	12,523	19,808
Stationery	33,300	38,751	48,759	11,820	20,126	24,335
Pianos	919	3,034	......	9,384	30,838	37,884

Article.	Australian Produce imported from other Australian States.			New South Wales Produce exported to other Australian States.		
	1903.	1904.	1905.	1903.	1904.	1905.
	£	£	£	£	£	£
Jewellery	62,831	69,616	73,894	34,640	52,747	57,106
Machines and Machinery	40,776	48,173	60,437	13,341	30,726	36,009
Agricultural implements	69,991	125,471	135,331	5,609	7,102	4,855
Metal manufactures—						
Bolts, nuts, &c.	5,665	6,428	4,468	99	244	229
Nails	4,822	7,458	9,364	37	371	235
Wire	2,160	2,500	5,520	......	162	167
Wire-netting	279	775	849	49,133	32,976	10,360
N.E.I.	40,621	45,111	52,883	21,171	42,598	38,613
Leather manufactures	7,442	8,452	11,122	5,998	8,236	8,082
Bicycles	13,000	8,161	8,898	243	757	956
Cement	724	1,804	1,115	4,262	21,475	32,443
Tiles	7,719	7,306	5,710	129	219	1,228
Timber—building	17,360	25,107	20,873	1,565	2,578	1,360
Furniture	13,754	19,937	26,324	7,272	8,556	12,261
Arms, ammunition	9,914	22,990	8,862	121	934	1,042
Drugs and chemicals	10,010	12,765	18,094	10,254	13,154	18,334
Medicines	13,712	15,347	20,235	34,114	76,191	88,735
Blue	673	1,535	1,500	7,369	7,521	10,463
Glassware, bottles, &c.	13,463	16,632	12,620	3,875	3,128	4,059
Candles	13,260	12,623	10,229	11,392	12,103	14,116
Blacking	4,914	5,942	4,613	772	1,208	1,454
Matches and vestas	1,417	9,986	6,693	......	......	4
Soap, N.E.I.	12,829	23,326	23,153	26,750	36,313	41,259
Wicker and wood manufactures	4,818	8,027	12.795	3,398	6,511	8,568
Starch	14,022	25,881	26,898	1,356	1,579	1,911
India-rubber hose	9,780	25,668	31,257	1,843	2,012	3,043
Manures	2,649	6,864	8,781	18,018	22,071	12,142
Timber	38,431	53,708	68,935	25,067	17,772	24,729
Coal	389	251	494	720,957	752,686	772,851
Total, all articles	11,394,999	12,700,923	13,356,420	6,011,160	7,464,266	9,648,845

The number of articles where the balance of trade is in favour of the State is not many, among the largest of the items being preserved meats, biscuits, flour, tobacco, cigarettes, pianos, wire-netting, cement, medicines, soap, and coal. In a great many cases the excess of imports has increased, the most notable exceptions being butter, preserved meats, biscuits, flour, hay and chaff, tobacco, cigarettes, pianos, machinery, soap, and manures. On the other hand apparel and attire, woollens, boots and shoes, hats and caps, agricultural machinery, matches, and starch show exceptionally large increases in the excess of imports. Of the total imports in 1905, manufactured goods, using the word in a wide sense, accounted for £2,287,366, and of the exports for £1,597,880. In 1903 the corresponding figures were £1,699,197 and £1,320,643 respectively, and in 1904 they were £1,952,698 and £1,442,280 respectively. It will, therefore, be seen that there has been a steady improvement during the three years.

VICTORIA.

In comparison with the imports from Victoria the export list is a very meagre one, although there is a tendency towards improvement. In all the long list shown below of the articles exchanged between the two States there are only eleven items under which New South Wales receives more from Victoria than she sends thereto, namely, butter, fresh oysters, frozen mutton, oranges and lemons, cigarettes, drugs and chemicals, medicines, blue, cement, candles, and coal. In the way of manufactured articles—such as apparel, woollens, boots, hats, jewellery, furniture, agricultural implements, &c., Victoria has all the advantage. With the exception of coal, the trade is overwhelmingly in favour of Victoria. As mentioned previously, however, a great portion of the southern districts of New South Wales is supplied from Victoria:—

Article.	Australian Produce imported from Victoria.			New South Wales Produce exported to Victoria.		
	1903.	1904.	1905.	1903.	1904.	1905.
	£	£	£	£	£	£
Butter	85,637	13,330	10,219	2,372	25,988	38,285
Cheese	20,492	6,620	4,763	300	160	3,815
Fish—Oysters	8	59	4	838	3,605	62
Meats—Bacon and ham	12,930	10,991	6,579	323	5,682	4,637
Frozen mutton	2	214	......	742	......	11,108
Milk, preserved	1,678	4,086	4,137	1,159	......	427
Biscuits	2,925	8,134	7,563	1,282	4,388	4,127
Confectionery	10,423	21,042	30,238	723	1,182	1,570
Fruits, fresh—						
Apples	1,019	2,903	2,066	298	14	6
Oranges and lemons	160	105	122	47,470	45,082	56,785
Other	69,487	16,734	27,458	2,007	1,259	896
Fruits, dried—						
Raisins	20,487	34,274	23,607	28	......	......
Sultanas			8,791			
Vegetables, fresh	14,484	3,102	8,186	1,182	3,827	4,021
Grain—						
Maize	37,258	11,930	36,995	354	230	491
Oats	22,770	31,871	48,587	2,605	246	289
Grain, prepared—						
Flour	15,269	12,217	13,226	15,589	3,043	7,610
Malt	71,717	68,047	46,987	3	4	25
Bran, pollard, and sharps	3,219	2,681	4,773	2,817	764	2,324
Hay and chaff	230,976	29,465	59,191	942	498	1,882
Jams and jellies	25,132	24,130	27,027	2,493	2,665	10,413
Onions	26,416	30,395	43,923	10	5	65
Potatoes	24,618	11,969	32,991	353	201	120
Sugar	18,132	16,001	24,731	......	......	......
Ale and beer	10,053	8,554	10,093	1,238	1,964	1,912
Spirits—Brandy	10,685	9,538	8,457	......	15	368
Wine	11,727	10,690	11,883	1,365	498	1,489
Tobacco—						
Manufactured	27,993	48,070	54,944	30,783	15,405	21,651
Cigarettes	1,678	3,772	5,820	129,730	30,398	37,267
Cigars	13,496	14,440	19,481	105	145	172

Article.	Australian Produce imported from Victoria.			New South Wales Produce exported to Victoria.		
	1903.	1904.	1905.	1903.	1904.	1905.
	£	£	£	£	£	£
Cocoa and chocolate	3,529	5,416	5,517	26	......	52
Coffee and chicory	2,045	5,216	1,760	20	61	20
Pickles	4,415	4,027	4,675	241	105	42
Blankets	6,961	14,996	24,116	250	57	257
Woollens	38,481	34,616	36,210	349	730	771
Apparel and attire	102,786	164,308	198,737	8,683	7,704	13,200
Umbrellas	5,382	5,018	5,927	3,074	3,048	521
Boots and shoes	98,912	145,699	137,973	3,564	6,937	14,996
Hats and caps	26,009	30,670	32,283	4,673	1,860	1,795
Cordage	16,167	19,770	23,108	7,289	8,111	10,834
Books	4,612	8,908	9,557	776	5,207	8,885
Paper	11,718	9,926	10,667	3,882	4,614	8,473
Stationery	30,015	33,619	42,587	3,919	4,846	5,807
Jewellery	42,227	47,407	51,851	2,505	4,451	10,866
Machines and machinery	33,276	31,176	43,259	5,253	6,919	9,241
Agricultural implements	64,925	108,379	117,671	3,170	1,531	2,722
Metal manufactures—N.E.I.	29,903	30,929	39,645	5,528	6,356	9,345
Bolts and nuts	5,524	6,001	4,310	6	......	20
Nails	4,638	7,216	8,767	2	38	21
Leather manufactures	5,001	6,031	8,375	969	969	435
Bicycles	11,724	7,188	7,308	65	105	200
Cement	59	204	47	306	6,680	12,209
Tiles	7,709	7,298	5,597	22	83	929
Furniture	9,750	11,436	14,364	1,954	1,609	3,172
Arms and ammunition	9,614	22,883	8,614	......	390	171
Drugs and chemicals	8,735	8,870	2,731	3,115	3,483	6,619
Medicines	11,026	11,698	15,213	10,698	29,222	35,335
Blue	669	1,357	1,455	2,364	2,092	1,923
Glassware, bottles, &c.	8,150	12,052	11,404	985	151	499
Candles	3,207	5,525	3,141	7,378	7,993	9,277
Blacking	4,629	5,207	4,124	173	140	308
Matches and vestas	1,417	9,972	6,668	......	......	1
Soap, N.E.I.	5,829	11,803	10,970	7,090	8,788	10,469
Manures	462	4,928	8,409	592	1,151	698
India-rubber hose	9,050	23,503	28,077	197	339	1,449
Starch	13,101	25,094	26,094	469	902	997
Coal	269	3	34	410,062	408,943	387,045

QUEENSLAND.

The imports from Queensland consist chiefly of meats, cheese, sugar, arrowroot, bananas, pine-apples, and timber, all more or less raw produce. During the three years there has been a great increase in the export trade with Queensland, chiefly in manufactured articles, biscuits, tobacco, cigarettes, apparel, boots, hats, metal manufactures and others. Coal is also exported largely. On the whole the balance of trade is in favour of New South Wales:—

Article.	Australian Produce Imported from Queensland.			New South Wales Produce Exported to Queensland.		
	1903.	1904.	1905.	1903.	1904.	1905.
	£	£	£	£	£	£
Butter	4,051	41,188	138,963	42,968	382	456
Cheese	1,984	5,270	9,144	30,068	475	133
Eggs	2,964	5,898	7,102	22	37	77
Fish—Fresh oysters	7,363	8,291	5,910	113	......	......
Meats—						
Bacon and ham	6,991	29,936	72,050	7,850	4,102	802
Frozen beef	13,934	8,016	1,467	244	......	......
Extract of	1,780	907	9,133	121	52	105
Preserved	37,280	24,951	42,448	6,271	2,143	3,206
Arrowroot	2,514	2,910	3,705	......	......	......
Biscuits	969	1,267	1,726	10,925	15,948	19,021
Fruit, fresh—						
Bananas	44,353	63,555	82,703	......	......	......
Pineapples	13,011	18,250	17,359	......	......	......
Apples	8	211	149	2,862	8,249	29,791
Oranges and lemons	103	1,738	1,592	27,852	5,531	7,097
Other	9,741	5,494	5,342	7,055	14,357	9,139
Vegetables, fresh	10,262	12,278	15,665	1,612	1,248	1,534
Grain—Maize	5,475	27,504	31,539	501	149	6,293
Grain, prepared—						
Flour	3,127	2,298	1,591	120,639	129,440	121,437
Oatmeal	31	42	7	5,027	6,665	7,760
Hay and chaff	277	330	3,062	4,502	6,377	5,744
Jams and jellies	3,526	3,897	2,536	11,590	15,186	17,147
Potatoes	796	2,384	1,085	1,259	6,662	32,586
Sugar	491,203	546,204	564,064	......	......	......
Aerated waters	3,268	3,442	2,648	9,793	9,125	7,654
Tobacco—						
Manufactured	4,332	4,283	1,294	50,042	41,402	48,620
Cigarettes	389	563	176	19,501	14,091	13,921
Apparel and attire	11,687	19,281	30,793	25,145	43,787	50,029
Umbrellas	224	137	286	4,430	5,173	6,177
Boots and shoes	3,430	3,038	2,589	34,505	71,045	76,459
Hats and caps	729	1,417	2,385	6,462	12,064	15,308
Stationery	897	1,708	2,420	5,145	7,998	11,420
Jewellery	12,268	12,704	9,929	4,378	12,297	14,737
Machines and machinery	1,431	3,104	4,034	4,488	18,307	19,199
Metal Manufactures—N.E.I.	3,631	6,567	6,787	10,035	21,956	16,949
Wire-netting	39	......	3	18,220	14,537	8,667
Leather manufactures	811	770	687	3,947	5,035	5,362
Cement	102	4	6	2,660	8,417	14,784
Timber	13,886	22,140	17,663	1,432	1,694	676
Drugs and chemicals	281	362	173	4,860	6,666	7,368
Medicines	240	815	632	6,817	19,688	22,245
Blue	......	40	......	2,265	2,407	3,131
Soap, N.E.I.	243	1,414	1,152	4,289	7,306	9,039
Timber	18,202	34,407	42,663	5,249	3,641	2,722
Manures	2,175	1,825	357	575	3,820	909
Coal	102	206	426	16,782	10,826	13,470

SOUTH AUSTRALIA.

The trade with South Australia is somewhat similar to that carried on with Victoria, owing to the fact that Broken Hill is almost entirely supplied by it. The Barrier trade is a great advantage to South Australia, as Broken Hill, with its population of 30,000, is commercially a part of that Stat There are very few articles where there is an excess of exports to Sout

Australia, the principal being biscuits, cigarettes, pianos, jewellery, medicines, and coal. In practically all the other important items the balance is in favour of South Australia.

Article.	Australian Produce Imported from South Australia.			New South Wales Produce Exported to South Australia.		
	1903.	1904.	1905.	1903.	1904.	1905.
	£	£	£	£	£	£
Butter	35,916	38,334	54,010	2,074	6,446	16,366
Eggs	34,014	35,077	29,108	66	32	10
Meats—Bacon and ham	11,750	10,491	7,558	551	737	1,582
Biscuits	722	874	1,233	5,059	8,396	7,588
Fruits, fresh—						
Bananas	2,107	3,000	3,402	......	......	......
Pineapples	61	140	65	......	......	......
Apples	4,681	3,862	4,352	86	18	187
Oranges and lemons	5,278	4,974	5,517	158	43	90
Other	8,121	9,645	13,128	308	376	237
Fruits, dried—						
Currants	......	2,708	3,605	......	......	......
Raisins	4,870	5,683	3,641	......	......	......
Sultanas	......	......	414	......	......	......
Vegetables	12,363	14,461	19,064	10	4	......
Grain, prepared—						
Flour	133,983	44,675	49,832	3,081	438	724
Malt	10,601	11,049	8,191	......	......	......
Bran, pollard, and sharps	14,049	9,218	14,236	185	408	2,245
Hay and chaff	251,179	44,157	76,798	36	28	6
Jams and jellies	9,821	7,346	8,611	981	137	253
Potatoes	11,879	6,048	16,104	180	433	599
Spirits—Brandy	3,959	6,325	7,669	......	......	......
Wine	21,066	24,731	23,409	837	672	1,512
Tobacco—						
Manufactured	11,635	13,640	12,600	16,812	12,767	8,194
Cigarettes	3,657	3,518	3,619	110,428	12,908	13,263
Cigars	1,949	6,751	2,976	1	572	230
Salt	22,937	29,612	30,896	......	......	......
Apparel and attire	15,567	22,197	27,369	8,894	11,713	12,452
Boots and shoes	21,754	22,446	34,593	4,046	4,015	3,297
Pianos	660	2,472	1,943	3,620	8,832	10,589
Jewellery	7,627	9,223	8,188	26,746	31,776	27,456
Machines and machinery	15,867	13,491	12,579	985	1,635	3,258
Agricultural implements	4,619	16,848	17,251	......	576	108
Metal manufactures—N.E.I.	9,574	11,363	14,366	1,814	4,527	3,250
Wire-netting	112	26	85	7,625	2,509	165
Furniture	2,477	6,478	9,995	450	544	764
Drugs and chemicals	982	3,304	6,445	741	1,378	1,287
Medicines	2,416	2,827	4,117	8,431	13,259	15,466
Blue	4	138	45	2,467	2,515	2,986
Candles	9,913	6,905	6,990	1,124	488	258
Soap, N.E.I.	6,757	10,109	11,019	4,197	4,292	4,565
Timber	10,496	10,175	8,552	1,483	1,926	2,188
Manures	......	111	15	5,021	7,150	190
Coal	18	42	34	179,264	235,937	256,448

WESTERN AUSTRALIA.

The import trade with Western Australia is practically nil, while the export trade has increased and is fairly valuable. The goods exported comprise principally coal, provisions, tobacco, apparel, pianos, and metal manufactures. Interstate trade with Western Australia has been absolutely free since 8th October, 1906. Prior to that date, under the Federal Constitution

Act, Western Australia could collect special duties on goods not originally imported from beyond the Commonwealth.

Article.	Australian Produce imported from Western Australia.			New South Wales Produce exported to Western Australia.		
	1903.	1904.	1905.	1903.	1904.	1905.
	£	£	£	£	£	£
Butter	......	8	......	10,746	13,453	24,856
Meats—Bacon and ham	......	......	......	1,788	5,624	8,798
Frozen mutton	......	......	......	1,503	7,752	28,542
Preserved	......	120	516	28,459	51,645	55,482
Bran, pollard, and sharps	......	......	......	9,530	10,155	14,758
Jams and jellies	......	31	......	4,337	5,574	3,785
Linseed cake	......	......	......	1,698	4,467	5,144
Tobacco—Manufactured	......	......	3	10,522	14,413	14,502
Cigarettes	......	252	......	4,502	9,748	10,790
Apparel and attire	25	41	18	2,535	7,211	9,751
Pianos	......	......	25	......	12,702	10,299
Machines and machinery	......	165	257	1,063	2,716	2,704
Metal Manufactures—N.E.I.	21	47	242	3,525	7,211	5,645
Wire-netting	......	......	......	17,748	11,819	228
Drugs and Chemicals	1	......	......	277	812	1,804
Medicines	2	4	5	4,343	9,003	10,994
Soap, N.E.I.	......	......	12	8,371	11,687	13,216
Manures	12	......	......	5,998	6,859	5,390
Coal	......	......	......	74,452	74,760	92,038

TASMANIA.

The principal articles imported from Tasmania are agricultural products in the shape of apples, potatoes, and other vegetables, oats, hay and chaff, hops, while there is also a good market for Tasmanian ale and jams. The exports are chiefly manufactured goods, apparel, boots, metal manufactures, medicines, soap, butter, biscuits, flour, and coal.

Article.	Australian Produce imported from Tasmania.			New South Wales Produce exported to Tasmania.		
	1903.	1904.	1905.	1903.	1904.	1905.
	£	£	£	£	£	£
Butter	131	149	396	......	13,477	13,968
Meats—Bacon and ham	1,274	282	63	154	4,079	8,657
Biscuits	......	19	22	3,807	5,412	7,048
Fruits, fresh—						
Apples	65,589	96,399	100,710	......	1	......
Oranges and lemons	......	2	8	5,701	2,572	4,651
Other	35,142	25,401	54,959	542	3,329	793
Vegetables	12,668	5,471	7,799	47	274	450
Grain—Oats	72,920	25,604	31,500	6	22	22
Flour	293	236	262	163	2,523	79
Jams and jellies	20,547	14,563	16,688	1,888	2,071	3,273
Potatoes	170,045	113,223	281,540	25	28	13
Hay and chaff	72,364	1,080	616	195	144	372
Ale and beer	13,237	10,913	7,386	144	......	304
Hops	15,573	17,147	14,028	......	......	......
Apparel and attire	296	1,312	515	4,426	5,737	5,513
Boots and shoes	674	93	43	8,848	9,042	6,880
Pianos	53	68	310	3,468	3,474	3,023
Metal Manufactures—N.E.I.	105	123	197	2,215	4,557	4,517
Wire-netting	......	......	......	3,721	2,841	746
Cement	41	......	......	1,232	4,659	2,727
Drugs and chemicals	11	229	282	1,261	815	1,157
Medicines	28	3	268	3,825	5,019	4,694
Blue	......	......	......	190	228	448
Soap, N.E.I.	......	......	......	2,803	4,240	4,030
Manures	......	......	......	5,832	3,091	5,054
Timber	1,462	3,322	4,205	58	226	463
Coal	......	......	......	40,397	22,220	23,850

TRADE WITH THE UNITED KINGDOM.

As previous tables show, the direct trade with the United Kingdom is decreasing. The highest value in any year was reached in 1883, when it amounted to twenty and a half millions sterling. As already pointed out the development of facilities for communication has caused a great increase in trade with the British possessions and with foreign countries.

A classification of the principal articles imported into the State from the United Kingdom during the year 1905 is given below :—

Article.	Value.	Article.	Value.
	£		£
Ale and beer	107,314	Floor cloths and coverings	93,152
Apparel and soft goods—		Glass and glassware	37,245
Apparel and attire, N.E.I.	665,397	Hats and caps	147,721
Cosies, cushions, &c.	49,580	India-rubber manufactures	33,472
Curtains	25,509	Jewellery and precious stones	181,467
Frillings, &c.	5,604	Leather	73,801
Gloves	60,948	Manures	1,868
Piece goods	2,257,739	Medicines	78,205
Sewing silks, &c.	110,279	Metals and Machinery—	
Trimmings, &c.	59,322	Implements, &c., agricultural	15,759
Arms, ammunition, and explosives	140,684	Iron and steel	431,354
Blankets and blanketing	26,393	Machines and machinery	451,898
Books (printed), music, &c.	118,208	Machine tools	18,868
Boots and shoes	77,110	Metals, manufactures of	581,361
Brushware (toilet and other)	34,743	Rails, &c., for Railways	31,220
Carpets and carpeting	48,529	Oils	73,059
Cocoa and chocolate (ground)	48,397	Paints and colours	101,593
Confectionery	27,099	Paper	203,538
Cordage and Twines—		Spirits	263,252
Metal	26,937	Stationery	70,921
Other	25,539	Tools of trade	57,132
Cutlery, N.E.I.	36,559	Vehicles	70,830
Drugs and chemicals	75,303	Watches, clocks, &c.	34,469
Earthenware, &c.	34,857		
Electrical materials	51,926	Total, all Imports from United Kingdom.	8,602,288
Fancy goods	53,339		
Fish (preserved)	34,206		

The largest market for the surplus products of New South Wales is found in the United Kingdom, which takes more than one-third of the export to oversea countries. The value of the principal articles exported during 1905 was as follows :—

Article.	Value.	Article.	Value.
	£		£
Butter	562,563	Leather	230,322
Copper	325,559	Meats	676,841
Gold	93,351	Skins and hides	283,916
Silver	575,224	Tallow	382,365
Tin	137,463	Wool	3,082,835
Wheat	604,206		
Flour	76,553	Total, all Exports to United Kingdom.	7,252,147

TRADE WITH BRITISH POSSESSIONS.

The following table shows the imports into New South Wales from the chief British possessions at decennial periods since 1860, and also for the year 1905:—

Possession.	1860.	1870.	1880.	1890.	1900.	1905.
	£	£	£	£	£	£
Canada	....	1,726	17,530	18,784	114,321	73,443
Cape Colony	....	....	5	55	943	4,546
Ceylon	29,739	210,114	13,668	43,702	213,195	274,165
Fiji	....	....	54,135	99,853	60,831	43,232
Hongkong	72,067	48,808	228,526	271,730	67,928	89,351
India	67,486	2,567	653	195,368	388,546	443,783
Mauritius	74,886	325,680	207,107	5,059	76,779	21,234
Natal	....	....	....	....	70	708
New Zealand	140,436	298,951	460,735	932,073	1,348,605	1,369,001
Straits Settlements	4,018	....	16,045	27,148	40,391	82,830
Other	207	60	1,665	1,626	42,150	45,933
Total £	388,839	887,906	1,000,069	1,595,398	2,353,759	2,448,226

As the table shows, imports from New Zealand, India and Ceylon, Canada, and Hongkong amounted in 1905 to £2,249,743, or about 90 per cent. of the total from all British possessions.

New Zealand gave promise at a former period of being one of the leading customers of this State; but from various causes both the imports and the exports fell away very considerably. The export trade in commodities shows but little sign of recovery, while the value of the imports fluctuates with the character of the season in New South Wales, a bad year being always attended with large importations of New Zealand oats and other produce. Although 1905 shows an increase, it was almost entirely due to larger shipments of gold for coinage.

Hongkong commercially is a port of China, and no inconsiderable portion of the trade of that Empire with New South Wales is transacted *via* that port. The Indian trade has grown up almost entirely since 1880, but it fluctuates largely owing to the variable exports of gold specie. The Fiji Island trade is valuable, but, like the trade with other colonial possessions, is rather unsteady.

From New Zealand, the imports comprised gold, £901,986; New Zealand pine, £171,101; hides, £59,670; flax, £28,147; and malt and hops, £7,814. Amongst the chief imports from India were bags and sacks, £285,321; tea, £46,118; canvas, £42,761; and castor oil, £14,460. From Ceylon, tea to the value of £259,787 was imported during the year. The Indian and Ceylon teas have quite overmastered the Chinese article in the public estimation; the imports of the latter having decreased from £217,402 in 1890 to £12,643 in 1905, while the value of Indian and Ceylon teas, imported during the same period, advanced from £43,317 to £305,905.

The chief article imported from Fiji is copra, the value of which in 1905 amounted to £8,832. Trade in bananas and sugar, which were formerly large items, has been greatly restricted by the Federal tariff. The import of sugar in 1905 was valued at £27,475, and bananas £2,736.

Prior to 1893 there was a fair import trade in lumber with Canada, but the establishment of a direct line of steamers between Sydney and Vancouver in that year had the effect of increasing the number of articles imported, and of laying the foundation of an export trade, which until that time was practically non-existent. The chief imports in 1905 were agricultural implements, £14,716; and timber, £10,173.

Hongkong furnished sugar to the value of £5,556; and opium, £13,679. Amongst the chief imports from other possessions may be mentioned sugar from Mauritius, valued at £21,234; and manures (rock phosphates) from Ocean

Island, £17,731. The chief imports from the Straits Settlements comprised pepper and other spices, £9,373; tapioca, £11,883; and rice, £29,859.

The exports from New South Wales to the chief British possessions at the same periods were as shown below:—

Possession.	1860.	1870.	1880.	1890.	1900.	1905.
	£	£	£	£	£	£
Canada	....	....	....	10	66,408	41,520
Cape Colony	....	....	712	1,014	600,288	208,805
Ceylon	....	1,258,818	1,781	4,080	58,402	191,181
Fiji	....	....	120,518	98,951	183,579	245,152
Hongkong	....	51,651	137,577	255,060	218,996	424,409
India	....	11,176	19,611	253,280	115,894	1,130,058
Mauritius	....	78,307	14,999	25,815	8,613	8,238
Natal	....	....	....	....	155,254	162,322
New Zealand	442,861	197,025	525,174	294,118	826,662	994,631
Straits Settlements	....	2,421	5,392	34,847	39 898	70,382
Other	421,176	....	2,915	1,654	40,973	61,741
Total £	864,037	1,594,393	828,679	968,314	2,314,897	3,509,889

From the above table it will be seen that the bulk of the exports is taken by India, New Zealand and Hongkong, in the order named, these three possessions receiving nearly three-fourths of the total exports to all British possessions in 1905. The chief exports to India were gold bullion, £765,344; horses, £42,774; copper ingots, £126,666; timber, rough £126,644; and coal, £29,909. Ceylon received in 1905 gold specie to the amount of £180,000. Amongst the principal exports to Cape Colony were frozen beef, £7,096; undressed timber, £33,529: frozen mutton, £56,816; butter, £24,434; and leather, £39,987.

New Zealand received gold specie to the amount of £180,000; undressed timber, £56,396; coal, £110,571; manures, £28,469; and soap, £15,642. Articles re-exported to New Zealand were machinery, £23,972; tea, £23,615; apparel, £7,040; and piece-goods, £26,933. Amongst exports to other British possessions may be mentioned the following, which were despatched to Natal during 1905—butter, £3,394; frozen mutton, £76,853; and flour, £25,238. The trade with South Africa, which assumed considerable proportions during the war, fell away largely in 1903, nevertheless the accessibility of its markets makes the possession a convenient outlet for Australia's exportable surplus of forage and foodstuffs.

TRADE WITH FOREIGN COUNTRIES.

The total value of the trade of the State with countries other than those under British dominion is appreciably increasing.

Every year steamers of greater tonnage and higher speed are visiting the Commonwealth of Australia from Europe, and a considerable expansion of commerce must of necessity take place, owing to the new outlets for trade which have been opened up thereby. The values of the imports into New South Wales from the principal foreign countries during the period 1860-1905 were as shown below:—

Country.	1860.	1870.	1880.	1890.	1900.	1905.
	£	£	£	£	£	£
Belgium	....	....	....	130,819	147,661	222,994
France and New Caledonia	17,917	66,119	160,348	201,791	298,593	156,427
Germany	18,785	....	47,169	639,475	1,105,664	864,289
Netherlands and Java	99,211	71,865	186,640	122,342	103,498	106,346
Italy	....	....	....	23,961	92,732	78,757
Sweden and Norway	4,000	....	....	30,743	109,397	25,178
China	367,115	258,412	358,129	241,840	199,456	28,681
Japan	....	....	5,419	22,040	122,041	145,257
South Sea Islands	56,103	13,024	42,789	40,214	107,468	77,286
United States	423,101	154,799	387,066	859,102	2,557,961	1,626,069
Other Foreign Countries	377,799	252,927	16,730	29,624	284,629	98,401
Total £	1,364,031	816,646	1,154,280	2,341,951	5,120,115	3,434,609

As the table shows, the imports from the United States amounted, in 1905, to £1,636,069, or nearly half the total imports from all foreign countries. Next in order comes Germany with £864,289, followed by Belgium with £222,994, and France with £156,427.

At one time the United States was the largest foreign market of this State, the value of exports thereto far exceeding those sent to any other foreign country; but the direct shipments of wool to the Continent of Europe, which are steadily increasing, have placed it below France and Germany, although the large shipments of gold may seem to indicate otherwise. The import trade, however, is still greater than that transacted direct with the principal Continental countries, although the imports from Germany are rapidly growing, and it is to be remembered that some foreign products are sent to the State by way of Great Britain. Further, a large proportion of the imports from America is represented by breadstuffs, which vary according to the local production.

The direct trade between this State and Belgium began in 1881, and may, to a large extent, be attributed to the International Exhibition held in Sydney during 1879-80. In point of value the Belgian trade of the State is larger than that of any other foreign country, Germany, France, and the United States excepted; but the port of Antwerp, which receives the bulk of the trade, is a distributing centre for a great part of the wool destined for French, German, and other Continental markets, and it is not possible to say how much of the goods shipped to Belgium are for local requirements.

A large trade has been maintained with Germany since 1879. Direct communication was established in 1887 by the North German Lloyd's Company, of Bremen, and further extended by a line of German cargo boats which commenced trading between Hamburg and Sydney in 1888. The trade has attained considerable dimensions, and now exceeds that with any other foreign country, although the customs returns may not always disclose this fact. The larger trade with the United States is, as has been shown, mainly due to shipments of gold.

The French trade has risen in importance since 1881, a result almost entirely due to the establishment of direct communication between this State and the Republic by the Messageries Maritimes Company, but it has been accompanied by a corresponding falling-off in the trade with New Caledonia, the chief dependency of France in the South Pacific. Thus, while in 1890 the total value of French imports and exports amounted to only £351,795, as against £3,708,274 in 1905, that of New Caledonia fell during the corresponding period from £277,309 to £153,845.

As already pointed out, New Caledonia is an important market for the produce of the State, though its value has been affected by the establishment of regular communication between France and her dependency, and by increases in the French tariff during recent years.

The only other foreign countries whose trade with New South Wales reaches a large figure are China and Japan. The imports and exports credited to Hongkong, however, belong in reality to the Chinese Empire generally, and the diminution which has taken place in the China trade since 1881 is to be attributed in no small degree to the transference of part of the trade from the ports of the Empire to Hongkong. Still, when allowance is made on this score, it will be found that the actual loss of trade is by no means inconsiderable. The main import from China is tea, which exhibits a falling-off, the decline being attributable to the large consumption of Indian and Ceylon teas, the imports of which have largely increased during late years. The direct export trade has never been great. To correctly gauge the commercial relations between this State and China, the trade of Hongkong should be considered in conjunction with the figures given above.

The war with China gave Japan a new importance in the eyes of the world, and that enterprising country may in the future be expected to offer a large market for many of the products of New South Wales. Direct steam communication between this State and Japan is now firmly established by a fleet of high-class vessels subsidised by the Japanese Government, which recognises the advantages to be derived from the institution of an additional market in these States for the productions of their country, while, on the other hand, the discovery of a new market for Australian wool is fully appreciated by New South Wales producers.

The imports from the United States comprise a large number of articles, amongst the principal being boots and shoes, £12,866; implements for husbandry, £57,332; leather, £25,939; machinery, £250,984; metal manufactures, £155,897; kerosene oil, £112,533; printing paper, £53,550; tobacco, £103,526; tools of trade, £41,144; vehicles, £38,314; and timber, £125,774.

The chief imports from Germany comprised wearing apparel, £60,156; dynamite, £1,302; candles, £3,519; fancy goods, £23,473; pianos, £58,226; machinery, £40,738; metal manufactures, £135,166; piece goods, £49,605; manures, £2,499.

From France the chief imports in 1905 were cream of tartar, £54,438; piece goods, £20,716; spirits, £6,698; and wine, £2,372.

The list of imports from Belgium is a long one, although liable to fluctuations. The principal articles were iron and steel, £14,754; glass and glassware, £16,914.

From Norway and Sweden timber of the value of £23,165 was received during the year.

For the same period the exports from New South Wales to the countries mentioned in the preceding table were as appended:—

Country.	1860.	1870.	1880.	1890.	1900.	1905.
	£	£	£	£	£	£
Belgium	....	....	....	1,011,846	620,940	1,787,103
France and New Caledonia	48,449	53,257	181,847	427,318	1,204,059	3,705,692
Germany	....	....	....	404,280	844,496	2,771,896
Netherlands and Java	....	25,981	11,042	50,358	86,203	220,120
Italy	....	....	....	24,498	61,182	176,770
Sweden and Norway	....	....	....	....	....	200
China	....	17,516	14,844	1,037	68,004	318,159
Japan	....	52	6,581	7,156	183,989	377,451
South Sea Islands	87,940	131,918	52.657	66,714	126,851	107,806
United States	8,835	38 817	172.648	1,300,375	3,981,242	602,146
Other Foreign Countries	428,058	35,349	32,869	169,988	470,809	695,477
Total £	623,282	302,890	472,488	3,463,565	7,597,133	10,762,439

As the table shows, the bulk of the exports was consigned to France, Germany, the United States, and Belgium, these four countries taking about 85 per cent. of the total exports to all foreign countries. A classification of the chief articles of export to these countries is appended:—

Article.	France.	Germany.	Belgium.	United States.
	£	£	£	£
Coal	928	5,291	......	42,921
Copper ingots	10,165	7,365	50,682	4,462
Silver-lead ore	......	4,828	96,651	......
Sheepskins with wool	90,024	3,831	19,962	3,801
Skins, other	6,611	27,686	40,893	154,996
Tin, ingots and ore	2,037	55,094	63,080	34,085
Wool	3,159,484	2,278,897	1,154,596	148,624

In addition to the above, Japan took scoured wool to the value of £83,732, and Chili, Hawaiian Islands, and the Philippines coal to the value of £192,347, £46,781, and £111,665 respectively. The Philippines received also frozen beef to the value of £3,248; the Netherlands kerosene shale valued at £27,815 and silver ore at £16,434; and Italy greasy wool to the value of £113,689.

Under present tariff conditions little extension of commercial intercourse with the United States can be looked forward to; but trade with the East, especially with China, Japan, and the Philippines, gives good promise for the future. As before mentioned, Japan has established a national line of steamers to foster the trade between that country and Australia, and during 1905 received from the State goods valued at £377,451, the chief item being wool valued at £92,169, together with smaller quantities of other pastoral products, such as bones, manures, &c.

The chief exports to Java comprised coal, £20,879; flour, £6,603; and horses, £3,345. Most of the requirements of the Dutch East Indies are met by America, but there is no doubt that judicious exploitation of the markets would result in a greatly increased demand for Australian products.

A fair amount of business is transacted with the South Sea Islands, the exports consisting chiefly of foreign goods of all descriptions re-exported, among which may be mentioned apparel, &c., £6,503; metal manufactures, £4,110; tobacco, £10,539; rice, £7,213. The imports consist of island produce, the chief of these being copra, valued in 1905 at £94,618. New Caledonia received exports from the State to the amount of £135,446 during the year 1905, the chief articles being coal, £7,885; wheat and flour, £45,290; sugar, £7,749; and kerosene oil, £4,112.

IMPORTS FOR HOME CONSUMPTION.

The net imports into New South Wales during 1905 amounted to £20,706,672, or £14 0s. 1d. per head of population. Of this amount £8,118,263 represented the value of Australian produce, and £12,588,409 the value of British and foreign produce. The former, however, includes a fair proportion of goods made from articles of extra-Australian origin. Excluding specie and bullion, the figures are: Australian produce, £6,276,308; British and foreign produce, £12,571,961; total, £18,848,269. Under the Federal Tariff goods of Australian production are free on being transferred from State to State, and under section 93 of the Commonwealth Constitution Act, the duties of customs chargeable on goods imported into a State, and the duties of excise paid on goods produced or manufactured in a State, and afterwards passing into another State for consumption, are taken as having been collected in the latter State and not in the former. Taking into account these inter-state adjustments, and deducting refunds and drawbacks, the net value of the imports of British and foreign produce for consumption in New South Wales, together with the amount of duty collected thereon during 1905, were as follows, the goods having been divided into stimulants, narcotics, other dutiable, and free. Specie and bullion are excluded:—

Description of Goods.	Imports for Home Consumption.	Duty Collected.	Average rate of duty.
	£	£	per cent.
Stimulants	479,075	796,819	166·32
Narcotics	191,987	306,956	159·83
Other dutiable goods	8,175,929	1,348,058	16·49
Free goods	4,183,465	....	....
Total ......£	13,030,456	2,451,833	18·81

The difference between the value of imports for home consumption shown in this table and the net import of British and foreign goods mentioned at the beginning of this paragraph, represents the value of goods taken from bond in excess of the value of goods placed in bond during the year.

This statement shows that the average rate of duty on dutiable goods other than stimulants and narcotics was equivalent to an *ad valorem* rate of 16·5 per cent. Excluding, as before, stimulants and narcotics, the average rate of duty on all goods, free and dutiable, was 10·9 per cent., and the proportion of free goods entered for consumption was 32·1 per cent. The next statement is interesting, as it shows the average tariff that existed in New South Wales in 1900, the year prior to the inauguration of the Commonwealth. Adopting the same divisions as in the preceding statement, the following results are shown:—

	1900.	1905.
	per cent.	per cent.
Proportion of goods on free list	87·6	32·1
Average rate of duty, *ad valorem*—		
On dutiable goods	10·3	16·5
On all goods other than stimulants and narcotics	1·3	10·9

Under the Commonwealth tariff the rates have been considerably increased, while, on the other hand, the free list has been greatly curtailed.

The amount collected from customs and excise, and the proportion per head of population during the last nine years, have been as follows:—The year 1896 was the first of the State tariff which was in existence when the Commonwealth took over the Department of Customs, while during 1901, for the first nine months, the collections were under the State tariff, and for the last three under the Commonwealth tariff:—

Year.	Net Amount collected from Customs and Excise.	Per Head of Population.	Year.	Net Amount collected from Customs and Excise.	Per Head of Population.
	£	£ s. d.		£	£ s. d.
1896	1,637,078	1 5 9	1901	2,475,729	1 16 1
1897	1,520,116	1 3 7	1902	3,116,052	2 4 9
1898	1,551,827	1 3 8	1903	3,384,458	2 7 7
1899	1,660,333	1 4 11	1904	3,094,608	2 2 9
1900	1,778,993	1 6 3	1905	3,112,368	2 2 1

Under the Federal tariff the contributions to Customs and Excise have increased by about £1 per head.

More than half the revenue is obtained from the duties, customs and excise, on stimulants and narcotics. Of the other divisions apparel and textiles contributes the largest amount, and then come the divisions comprising agricultural products and groceries, and metals and machinery.

CUSTOMS AND EXCISE REVENUE.

On the 1st January, 1901, the Department of Customs and Excise was transferred to the control of the Commonwealth. Previously it had been administered by the State. On the 8th October, 1901, the uniform Federal tariff was introduced in the Federal Parliament, and thereupon the State tariff ceased to have effect. The duties of Customs and Excise are collected under the Customs Act, 1901 (No. 6 of 1901), the Customs Tariff, 1902 (No. 14 of 1902), and the Excise Tariff (No. 11 of 1902).

The following statement shows the amounts collected under each division of the tariff during 1905, and also shows the interstate adjustments, and refunds and drawbacks :—

Tariff Division.	Credited.			Debited.				Net Revenue Collected
	Gross Collections.	Interstate Credits.	Total.	Drawbacks.	Refunds.	Interstate Debits.	Total.	
Customs—	£	£	£	£	£	£	£	£
I. Stimulants	825,720	39,473	865,193	....	322	68,052	68,374	796,819
II. Narcotics	350,573	42,036	392,609	....	3,672	81,981	85,653	306,956
III. Sugar	27,983	1,429	29,412	1,251	114	3,295	4,660	24,752
IV. Agricultural products and groceries	259,357	20,301	279,658	7,120	680	15,818	23,618	256,040
V. Apparel and textiles	515,622	69,038	584,660	10,976	1,071	58,975	71,022	513,638
VI. Metals and machinery	174,939	17,353	192,292	5,137	1,870	19,780	26,787	165,505
VII. Oils, paints, and varnishes	51,594	3,975	55,569	2,831	217	4,774	7,822	47,747
VIII. Earthenware, cement, china, glass, and stone	51,127	4,066	55,193	844	288	4,244	5,376	49,817
IX. Drugs and chemicals	23,417	2,554	25,971	1,265	47	5,933	7,245	18,726
X. Wood, wicker, and cane	53,336	7,437	60,773	933	179	3,540	4,652	56,121
XI. Jewellery and fancy goods	70,467	18,672	89,139	4,046	531	27,861	32,438	56,701
XII. Leather and rubber	54,156	15,181	69,337	1,495	149	14,664	16,308	53,029
XIII. Paper and stationery	40,232	4,797	45,029	747	328	5,157	6,232	38,797
XIV. Vehicles	23,657	3,175	26,832	524	56	2,504	3,084	23,748
XV. Musical instruments	16,215	2,172	18,387	189	47	2,530	2,766	15,621
XVI. Miscellaneous	30,968	3,120	34,088	1,608	117	4,816	6,541	27,547
Total, Customs	2,569,363	254,779	2,824,142	38,966	9,688	323,924	372,578	2,451,564
Excise—								
Beer	152,663	2,710	155,373	116	....	963	1,079	154,294
Spirits	81,743	3,575	85,318	1	13	1,974	1,988	83,330
Sugar	169,312	19,610	188,922	676	9	2,096	2,781	186,141
Tobacco, &c.	298,381	36,169	334,550	....	....	107,655	107,655	226,895
Starch	6,408	1,793	8,201	4	....	847	851	7,350
Licenses	2,794	....	2,794	....	....	....	....	2,794
Total, Excise	711,301	63,857	775,158	797	22	113,535	114,354	660,804
Total, Customs and Excise	3,280,664	318,636	3,599,300	39,763	9,710	437,459	486,932	3,112,368

AGRICULTURE.

It is only within comparatively recent years that New South Wales has attained any prominence as an agricultural country. The pastoral industry so completely overshadowed the agricultural that the latter ranked as only of secondary importance, notwithstanding the fact that the soil is as varied as the climate is diversified, and that within the boundaries of the State not only the productions of the temperate regions may be cultivated, but even those of cold and of sub-tropical latitudes. Except in the inaccessible and rugged portions of the mountain chains and the more arid regions of the north-western districts, it may be said that the greater part of the land adapted for settlement is in some form or other capable of being cultivated. The area absolutely unfit for cultivation of any sort has been roughly estimated to be less than 5,000,000 acres. The true farming portion of the State comprises the whole of the eastern division, with the exception of the rugged country already referred to, and most of the central division, and it has been proved, by observations extending over a series of years, that in this portion there are about 50,000,000 acres, where the rainfall is sufficiently plentiful and regular, in eight years out of ten, for the successful pursuit of agriculture in all its branches. Beyond that portion there is the great division of the Western Plains, where there is an irregular rainfall and a want of uniformity in the seasons, but which is, nevertheless, eminently adapted for wool-growing.

Area under Cultivation.

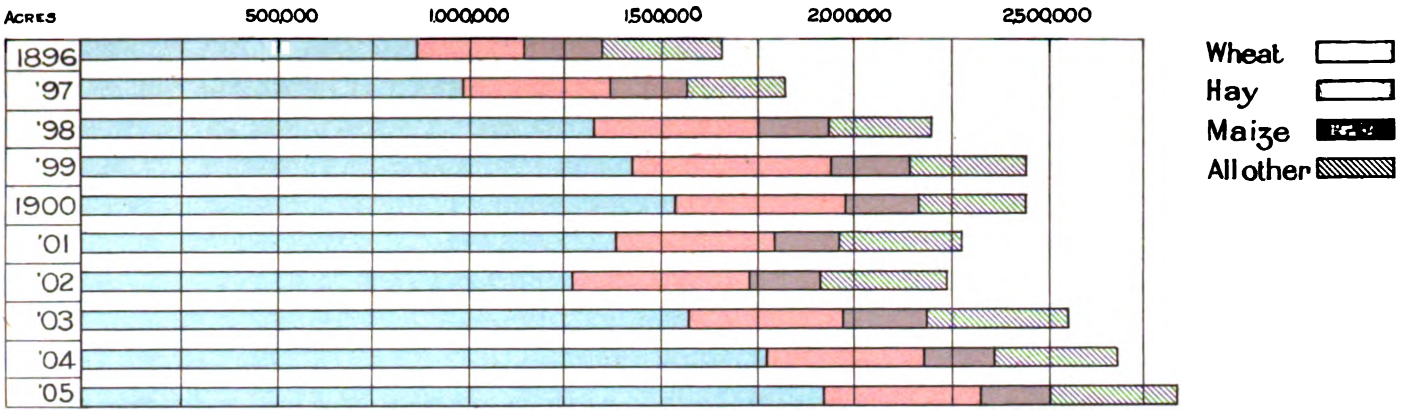
During the year ended 31st March, 1906, an area comprising 3,465,611 acres, including grassed lands, was under cultivation. The area under crops properly so-called was 2,838,081 acres, so that the area under artificially-sown grasses was 627,530 acres.

The progress of cultivation during the last forty-six years is shown in the table below. It will be seen that since 1895 both the area under crops and the total area in cultivation have more than doubled. In the following table, and in all others in this chapter, the year covers the period from the 1st April in the year mentioned to the 31st March in the succeeding year :—

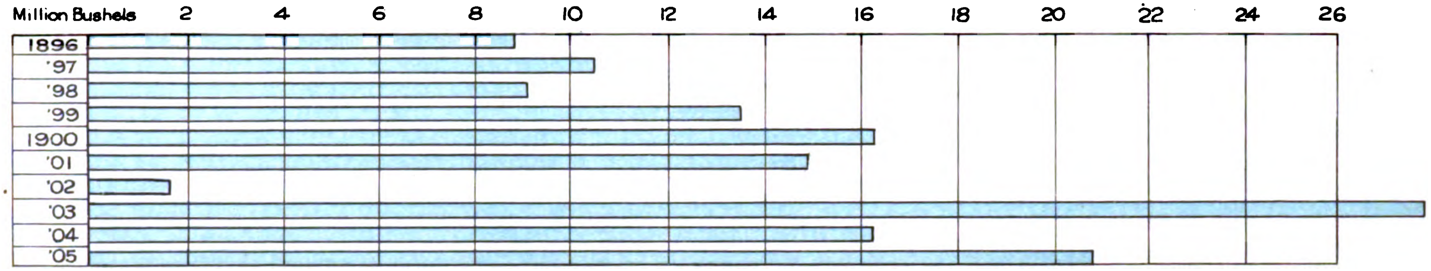
Year.	Area under crops during year.		Area in cultivation, including sown grass-lands.	
	Total.	Per inhabitant.	Total.	Per inhabitant.
	acres.	acres.	acres.	acres.
1860	*	....	260,798	0·7
1870	397,389	0·8	426,976	0·9
1880	629,180	0·9	710,337	1·0
1885	737,701	0·8	868,093	0·9
1890	852,704	0·8	1,241,419	1·1
1895	1,348,600	1·1	1,649,462	1·3
1896	1,659,717	1·3	2,043,733	1·6
1897	1,821,829	1·4	2,198,231	1·7
1898	2,204,500	1·7	2,553,329	1·9
1899	2,439,639	1·8	2,818,491	2·1
1900	2,445,564	1·8	2,868,305	2·1
1901	2,276,528	1·7	2,744,367	2·0
1902	2,245,839	1·6	2,723,468	2·0
1903	2,542,919	1·8	3,095,420	2·2
1904	2,672,973	1·8	3,280,970	2·2
1905	2,838,081	1·9	3,465,611	2·3

* Information not available.

AREA UNDER CULTIVATION



PRODUCTION OF WHEAT



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During the first thirty-one years after the separation of Queensland, New South Wales made very slow progress in agriculture, and it was not until 1892 that the area under crop exceeded a million acres. During the next six years, two million acres were exceeded, but in 1905 the area had not reached three million acres. The largest increase in any year was in 1898, when it amounted to 382,671 acres, or over 20 per cent. A better idea of the progress of agriculture, however, is obtained by comparing the area under crop with the population. Up to 1893, less than 1 acre per head was cultivated; between 1893 and 1898 the proportion doubled, but since 1898 it has remained practically stationary. The following statement shows, since 1870, in decennial periods, the relative increases in population and in the area under crop:—

	1870–80.	1880–90.	1890–1900.	1900–05.
Increase per cent. in population ...	48·7	51·2	22·9	9·6
Increase per cent. in area under crop	58·3	35·5	18·7	10·6

From 1880 to 1900, the population increased nearly half as fast again as the area under crop, but since 1900 the cultivation has slightly outpaced the population. The increase in cultivation from 1870 to 1880 was due, to a large extent, to the renewed attention paid to agriculture after the abatement of the gold fever, while the decline from 1880 onwards was partly due to the fact that most of the best land had been taken up.

It has already been stated that during the last ten years the area under cultivation has doubled, and the following statement will show the districts where the greatest advance has been made in the period:—

Division.	Area under Crops.		Increase, 1895–1905.		Proportion of total area under crop.	
	1895.	1905.	Total.	Per cent.	1895.	1905.
	acres.	acres.	acres.		per cent.	per cent.
Coastal—						
North Coast	104,135	109,704	5,569	5·4	7·7	3·9
Hunter and Manning	98,968	103,511	4,523	4·6	7·4	3·6
Cumberland	41,510	46,053	4,543	10·9	3·1	1·6
South Coast	40,870	51,009	10,139	24·8	3·0	1·8
Total	285,503	310,277	24,774	8·7	21·2	10·9
Tableland—						
Northern	45,103	68,362	23,259	51·6	3·3	2·4
Central	156,837	222,715	65,878	42·0	11·7	7·9
Southern	50,493	55,336	4,843	9·6	3·7	1·9
Total	252,433	346,413	93,980	37·2	18·7	12·2
Western Slopes—						
North	59,340	265,217	205,877	346·9	4·4	9·4
Central	111,993	412,578	300,585	268·4	8·3	14·5
South	213,459	442,855	229,396	107·5	15·8	15·6
Total	384,792	1,120,650	735,858	191·2	28·5	39·5
Riverina	380,397	745,183	364,786	95·9	28·3	26·3
Western Plains—						
North	1,454	10,261	8,807	605·7	0·1	0·4
Central	32,865	287,437	254,572	774·6	2·4	10·1
Total	34,319	297,698	263,379	767·4	2·5	10·5
Western Division	11,156	17,860	6,704	60·1	0·8	0·6
New South Wales	1,348,600	2,838,081	1,489,481	110·4	100·0	100·0

The largest aggregate increase has taken place in the Riverina, where 364,786 acres of new land were brought under the plough during the ten years. Taken as a whole, the Western slopes show the greatest advance with 735,858 acres, or nearly half of the total increase. The Riverina was followed by the Central-western Slope and Central-western Plain. On the coast very little progress was made, only 24,774 additional acres being brought under cultivation. The northern and southern divisions of the tableland also show small increases. The districts which are most cultivated are the Riverina, which comprises 26·3 per cent. of the land under crops; the South-western Slope, with 15·6 per cent.; and the Central-western Slope, with 14·5 per cent. The Central-western Plain, the North-western Slope, and the Central Tableland are close together, with 10·1, 9·4, and 7·9 per cent. respectively. In the Riverina the advance has been largest in counties Denison, Bourke, Urana, Mitchell, and Hume. In the northern portion of the Western Slopes, the counties Darling, Parry, and Pottinger show the most advance; in the central portion, Ashburnham and Lincoln; and in the southern portion, Bland and Monteagle. In the Central-western Plain the increase has been in Narromine and Cunningham. The largest increase in any county was in Narromine, in the Central-western Plain, amounting to over 100,000 acres, so that it now stands sixth among the counties so far as regards the area under cultivation, being exceeded by Denison, Hume, and Bourke in the Riverina, Ashburnham in the Central-western Slope, and Bland in the South-western Slope. The respective areas under crops in these six counties on the 31st March, 1906, were: Bourke, 149,378 acres; Ashburnham, 147,256 acres; Denison, 145,007 acres; Bland, 139,054 acres; Hume, 126,385 acres, and Narromine, 111,642 acres.

The great extension of cultivation during the last ten or eleven years has been largely contributed to by the taking up of wheat-growing on large estates formerly devoted almost exclusively to grazing, and also by the adoption of the system of farming on shares. During the year 1905 there was an increase of 62,000 acres in the area cultivated on shares, the total being 402,234 acres, of which nearly one-half—namely, 187,102 acres—was in the Riverina division.

In order that the figures relating to area under cultivation may be properly appreciated, the following table has been prepared, showing the area under crops, in conjunction with the total area, and the area in occupation, in each division during 1905:—

Division.	Total area.	Area under occupation in holdings over 1 acre.	Area under crops.	Area under permanent sown grasses.	Proportion of area under crops.	
					To Total Area.	To area under occupation.
	acres.	acres.	acres.	acres.	per cent.	per cent.
Coastal—						
North Coast	5,409,370	4,233,487	109,704	343,268	2·0	2·6
Hunter and Manning	10,390,920	5,804,352	103,511	36,476	1·0	1·8
Cumberland	1,070,989	528,326	46,053	5,847	4·3	8·7
South Coast	5,484,122	2,434,041	51,009	173,140	0·9	2·1
	22,355,401	13,000,206	310,277	558,731	1·4	2·4
Tableland—						
Northern	8,928,487	7,491,580	68,362	8,524	0·8	0·9
Central	8,989,259	6,255,652	222,715	12,598	2·5	3·6
Southern	7,913,500	6,551,425	55,336	4,421	0·7	0·8
	25,831,246	20,298,657	346,413	25,543	1·3	1·7
Western Slopes—						
North	9,813,555	8,101,492	265,217	14,106	2·7	3·3
Central	6,252,567	5,024,100	412,578	40,445	6·6	8·2
South	8,185,759	7,051,184	442,855	32,133	5·4	6·3
	24,251,881	20,176,776	1,120,650	86,684	4·6	5·6
Riverina	19,767,073	17,885,613	745,183	33,559	3·8	4·2
Western Plains—						
North	10,030,901	7,273,402	10,261	1,761	0·1	0·1
Central	16,029,880	14,098,641	287,437	84,044	1·8	2·0
	26,060,781	21,372,043	297,698	85,805	1·1	1·4
Western Division	80,368,498	75,282,830	17,860	9,651	0·0	0·0
New South Wales	198,634,880	168,016,125	2,838,081	799,973	1·4	1·7

Only about 1·4 per cent. of the total area of New South Wales is actually devoted to the growth of agricultural produce, and if the small extent of land upon which permanent artificial grasses have been sown for dairy-farming purposes be added to the area under crops, the proportion reaches only 1·7 per cent. of the total area of the State, and represents about 2·2 acres per head of its population. The proportion of the cultivated area on alienated holdings is only 5·4 per cent. of the total area of alienated rural lands. Of the area in occupation, 48,728,542 acres are alienated and 119,287,583 acres are Crown leases.

Agricultural settlements, pure and simple, are confined to very limited areas in the alluvial lands of the lower valleys of the coastal rivers, and to parts of the southern and central divisions of the tableland. The growth of crops is largely carried on in conjunction with grazing. Tenant occupancy, so general in the United Kingdom, is but little known in New South Wales, for of the total area under crops, 2,303,109 acres, or 81·2 per cent., were cultivated by the owners, while 534,972 acres, or 18·8 per cent., were cultivated by tenant occupiers, including Crown land lessees.

In addition to the area shown as cultivated and under sown grasses, 49,466,578 acres were ringbarked and partly cleared, and 506,341 acres were cleared and prepared for cultivation.

It will be seen that cultivation is not confined wholly to particular districts, but is carried on in all parts of the State. Some of the best lands for producing cereals are, and will remain probably for many years, in the hands of the pastoralists; whilst farmers have not always settled on the kind of country best suited for the cultivation of their crops.

The county of Cumberland, which contains the Metropolis, has the largest area cultivated in proportion to area under occupation, but generally the Western Slopes show the largest relative areas under cultivation, followed by the Riverina and Central Tableland. In the north-western plain and the western division there is practically no cultivation.

By far the largest proportion of the area under crops is devoted to the cultivation of wheat, which in 1905 took up 68·4 per cent. of the total. Hay was responsible for 15·4 per cent., after which came maize 6·7 per cent., green food 3·3 per cent., and orchards and market gardens 1·9 per cent. The following statement shows the area devoted to the cultivation of each of the principal crops, at decennial intervals since 1880, and the proportion per cent. of each to the total:—

Crop.	Area.				Proportion per cent.			
	1880.	1890.	1900.	1905.	1880.	1890.	1900.	1905.
	acres.	acres.	acres.	acres.				
Wheat	253,137	333,233	1,530,609	1,939,447	40·2	39·1	62·6	68·4
Maize	127,196	191,152	206,051	189,353	20·2	22·4	8·4	6·7
Barley	8,056	4,937	9,435	9,519	1·3	·6	·4	·3
Oats	17,922	14,102	29,383	38,543	2·9	1·6	1·2	1·4
Hay	131,153	175,242	466,236	438,036	20·9	20·6	19·1	15·4
Green Food	21,383	37,473	78,144	93,354	3·4	4·4	3·2	3·3
Potatoes	19,095	19,406	29,408	26,374	3·0	2·3	1·2	·9
Sugar-cane	10,971	20,446	22,114	21,805	1·7	2·4	·9	·8
Vines	4,800	8,044	8,441	8,754	0·8	·9	·3	·3
Orchards	24,565	33,643	46,234	46,615	3·9	3·9	1·9	1·6
Market-gardens		5,098	7,764	9,119		·6	·3	·3
Other Crops	10,902	9,928	11,745	17,162	1·7	1·2	·5	·6
Total	629,180	852,704	2,445,564	2,838,081	100	100	100	100

The area devoted to wheat has always exceeded that given to other crops. From the year 1880 the proportion under wheat has steadily increased, until it now stands at more than two-thirds of the whole area under cultivation. During the same time the proportion under maize has decreased from 20 per cent. to 7 per cent., and hay from 21 to 15 per cent. The other crops have not varied much, except that the tendency has been for the proportion to decrease.

VALUE OF PRODUCTION.

The average value of the principal crops, with the proportion of each to the total value, during the last three years, is shown in the following table; the values are based on prices obtained at the farm:—

Crop.	1903.		1904.		1905.	
	Value.	per cent.	Value.	per cent.	Value.	per cent.
	£		£		£	
Wheat	3,974,840	47·6	2,428,500	44·9	2,920,500	44·6
Maize	712,160	8·5	557,000	10·3	669,385	10·2
Barley	21,768	·3	39,485	·7	15,840	·2
Oats	125,216	1·5	67,985	1·3	110,385	1·7
Hay and straw	2,254,573	27·0	985,260	18·2	1,393,285	21·3
Green food	154,260	1·8	175,435	3·2	174,880	2·7
Potatoes	106,393	1·3	251,940	4·7	266,615	4·1
Sugar-cane	195,856	2·3	180,870	3·3	161,240	2·5
Grapes	49,152	·6	54,750	1·0	51,330	·8
Wine and brandy	78,484	·9	76,920	1·4	68,860	1·1
Oranges and lemons	117,079	1·4	82,480	1·5	120,045	1·8
Orchards	211,318	2·5	162,670	3·0	189,195	2·9
Market gardens	213,412	2·6	225,400	4·2	242,375	3·7
Other crops	144,413	1·7	125,015	2·3	159,115	2·4
Total	8,358,924	100	5,413,710	100	6,543,050	100

It will be seen to what an extent the return from agriculture depends upon wheat and hay, these crops in 1905 returning £4,313,785, or 66 per cent. of the total production. The value in 1903 was the largest ever received in New South Wales, and was due to the record wheat yield of that season. Maize follows wheat in value, but at a considerable distance; while the return from sugar-cane, vines, green food, orchards, and gardens, although valuable, does not exhibit a very high proportion.

The next statement shows the value of the production from agriculture in 1870, 1880, and each year since 1890, as well as the value per acre:—

Year.	Value of Production.	Value per acro.			Year.	Value of Production.	Value per acre.		
	£	£	s.	d.		£	£	s.	d.
1870	2,220,000	5	11	9	1897	6,249,677	3	8	7
1880	3,849,423	6	2	4	1898	4,874,696	2	4	3
1890	4,181,940	4	18	1	1899	5,609,437	2	6	0
1891	3,614,594	4	5	5	1900	5,855,674	2	8	0
1892	4,004,402	3	19	3	1901	7,060,203	3	2	0
1893	3,903,749	3	4	8	1902	4,138,627	1	16	10
1894	3,438,512	2	11	10	1903	8,358,924	3	5	9
1895	4,100,709	3	0	10	1904	5,413,710	2	0	6
1896	5,373,614	3	4	9	1905	6,543,050	2	6	1

The highest relative value received was in 1881, when the return was £4,215,268, or £7 4s. 5d. per acre. A decrease in prices, and not want of productiveness, was responsible for the decline in value after 1881. The fall in prices, especially of wheat, was very rapid down to 1895; for the next three years there was a very material increase; in 1899 they fell again to the 1895 level; but in 1901 there was a more or less general increase; while towards the close of 1902, and almost up to the close of 1903, the effects of the adverse season were acutely felt, and prices rose to double those of the previous year. At the end of 1903, when the heavy crops began to come in, prices again fell, but they were, nevertheless, higher than the 1901 level. In 1904 prices increased slightly, and were generally higher than at the close of 1903. In 1905 there was a slight falling-off as compared with 1904.

WHEAT.

In New South Wales, as in most other countries, the area devoted to wheat far exceeds that of any other cereal, and it is in this form of cultivation that the State shows the greatest expansion. In 1905 the area under wheat for grain was 1,939,447 acres, which was over two-thirds of the whole area under cultivation, and more than three times the area laid down ten years ago. The year 1897 may be said to mark the beginning of the present era of wheat-growing in New South Wales, for it was in that year that the production for the first time exceeded the consumption, and left a surplus available for export. The following statement shows the increase in the area under wheat, between 1897 and 1905, in the various districts:—

District.	Area under Wheat for Grain.		Increase, 1897-1905.	Proportion in each District.	
	1897.	1905.		1897.	1905.
	acres.	acres.	acres.	per cent.	per cent.
Coastal	16,192	10,845	— 5,347	1·6	·6
Tableland—					
Northern	20,686	14,546	— 6,140	2·1	·7
Central	80,318	113,636	33,318	8·1	5·9
Southern	22,421	13,538	— 8,883	2·2	·7
	123,425	141,720	18,295	12·4	7·3
Western Slopes—					
North	59,330	217,992	158,662	6·0	11·2
Central	102,136	343,928	241,792	10·3	17·7
South	198,268	350,780	152,512	19·9	18·1
	359,734	912,700	552,966	36·2	47·0
Western Plains	31,589	249,360	217,771	3·2	12·9
Riverina	460,474	620,616	160,142	46·4	32·0
Western Division	1,936	4,206	2,270	·2	·2
New South Wales	993,350	1,939,447	946,097	100·0	100·0

The next statement shows the yield in each of the abovenamed districts in the same years:—

District.	Yield of Grain.		Average Yield per Acre.		
	1897.	1905.	1897-1905.	1897.	1905.
	bushels.	bushels.	bushels.	bushels.	bushels.
Coastal	329,274	63,638	14·5	20·3	5·9
Tableland—					
Northern	300,215	213,706	14·6	14·5	14·6
Central	933,296	1,159,137	10·8	11·6	10·2
Southern	242,556	153,789	11·0	10·8	11·4
	1,476,067	1,526,632	11·3	12·0	10·8
Western Slopes—					
North	1,208,859	2,221,094	12·4	20·4	10·2
Central	1,398,967	3,037,476	9·9	13·7	8·8
South	1,849,521	4,603,764	11·8	9·3	13·1
	4,457,347	9,862,334	11·3	12·4	10·8
Western Plains	563,066	2,018,194	9·2	17·8	8·1
Riverina	3,725,421	7,243,888	10·2	8·1	11·7
Western Division	8,936	22,514	5·1	4·6	5·4
New South Wales	10,560,111	20,737,200	10·7	10·6	10·7

As might perhaps have been expected, the proportions of land under wheat in each district generally follow the same order as shown in a previous table for the total area under cultivation. Between 1897 and 1905, however, the proportions in each district have changed considerably. The tablelands, for instance, now only include 7·3 per cent., as against 12·4 per cent. in 1897, and the Riverina 32 per cent., as against 46·4 per cent., while the Western Slopes have increased from 36·2 to 47 per cent., and the Western Plains from 3·2 to 12·9 per cent. The largest increase in area has been in the Central-western Slope, where it is now more than three times as large as in 1897, closely followed by the Western Plains, then the Riverina, the North-western Slope, and the South-western Slope. On the northern and southern tablelands, wheat-growing has declined in favour. The great bulk of the wheat, however, is grown on the Western Slopes and in the eastern part of the Riverina, these two districts together embracing nearly 80 per cent. of the whole. On the Coast, in the Western Division, and in the Central-western Plain with the exception of the eastern fringe, the wheat area is very small. The whole of the expansion in the Western Plains is accounted for by the increase around Narromine.

The most prolific district usually is the North-western Slope, which shows the highest average yield for the nine years covered by the table, and it should be remembered that these nine years were amongst the most adverse experienced by the State. The Riverina and South-western Slope, which yield the largest aggregate crops, of course affect the general average for the whole State most, and their averages are not far from the mean. The average yields on the northern tableland are high, but the aggregate yield is not large. The best yield obtained in the State was in 1903, when it amounted to 27,334,141 bushels, and averaged 17·5 bushels per acre; otherwise the yield in 1905 was the highest.

A great proportion of the immense areas of the State, hitherto devoted exclusively to pastoral pursuits, consists of land which could be profitably utilised for agriculture, much of it being more suitable for the cultivation of wheat than some of the land now under crop; and the returns show that wheat-growing, which was formerly confined to small farmers, is now engaging the attention of a number of the large landholders, who cultivate large areas of thousands of acres in extent, and use the most modern and effective implements and machinery for ploughing, sowing, and harvesting.

A considerable portion of the new area which is being brought under wheat in New South Wales is cultivated on the shares system, especially in the southern portion of the State. Under this system, the owner leases the land to the agriculturist for a season, or a few seasons, for the purpose of wheat-growing only, the farmer possessing the right of running upon the estate the horses necessary for working the farm, and the owner the right of depasturing his stock when the land is not in actual cultivation. It is usual for the owner to provide seed, and the tenant labour; and up to a specified yield the parties to the agreement take equal shares of the produce, any excess going to the farmer as a bonus. The system, however, is subject to local arrangements. The number of acres farmed on the halves system during 1905 was 402,234, and during the preceding year 340,015.

The progress of wheat-growing for many years was slow and irregular. For some years prior to 1866 the area under crop remained almost stationary at a little more than 125,000 acres, but in 1866 the acreage had increased to 175,000. Eleven years later, the area reaped for grain was practically the same, although during the intervening period it had fluctuated somewhat. Then more land was laid under the cereal, and in

1878 the area increased to 233,252 acres. In 1890, twelve years later, the acreage stood at 333,233 acres, although during the interval it had reached as high as 419,758 acres. From 1892 onwards progress was more regular. A great impetus was given to the industry in 1896, when the area increased to 866,112 acres, while in 1900 it had advanced to 1,530,609 acres, and in 1905 to 1,939,447 acres. The following statement shows the area under wheat for grain in each year since 1876, together with the total production and average yield per acre:—

Year.	Area under Wheat for Grain.	Yield.		Year.	Area under Wheat for Grain.	Yield.	
		Total.	Average per acre.			Total.	Average per acre.
	acres.	bushels.	bushels.		acres.	bushels.	bushels.
1876	145,608	2,391,979	16·43	1894	647,483	7,041,378	10·88
1877	176,686	2,455,507	13·84	1895	596,684	5,195,312	8·71
1878	233,252	3,439,326	14·74	1896	866,112	8,853,445	10·22
1879	233,368	3,613,266	15·48	1897	993,350	10,560,111	10·60
1880	253,137	3,717,355	14·69	1898	1,319,503	9,276,216	7·03
1881	221,887	3,405,966	15·35	1899	1,426,166	13,604,166	9·54
1882	247,361	4,042,395	16·35	1900	1,530,609	16,173,771	10·56
1883	289,757	4,345,437	15·00	1901	1,392,070	14,808,705	10·64
1884	275,249	4,271,394	15·52	1902	1,279,760	1,585,097	1·24
1885	264,867	2,733,133	10·45	1903	1,561,111	27,334,141	17·51
1886	337,730	5,868,844	17·37	1904	1,775,955	16,464,415	9·27
1887	389,390	4,695,849	12·06	1905	1,939,447	20,737,200	10·69
1888	304,803	1,450,503	4·75				
1889	419,758	6,570,335	15·65				
1890	333,233	3,649,216	10·95	Average for 30 Years...............			10·81
1891	356,666	3,963,668	11·11	,, 10 Years ended 1885			14·70
1892	452,921	6,817,457	15·05	,, ,, ,, 1895			11·68
1893	593,810	6,502,715	10·95	,, ,, ,, 1905			9·90

The advance which New South Wales is now making in wheat cultivation is in every way gratifying. Despite the vicissitudes of the climate, it will be seen from the above table that lack of capacity to produce a payable average has not been the cause of this tardiness in development. Taking the whole period of thirty years, the mean annual average yield has been 10·81 bushels to the acre. The highest averages recorded have been 17·51 in 1903, and 17·37 in 1886. The lowest was 1·24 bushels in the disastrous year 1902. During the whole period there were only six seasons when the yield fell below 10 bushels per acre, namely:—1888, with 4·75; 1895, with 8·71; 1898, with 7·03; 1899, with 9·54; 1902, with 1·24; and 1904, with 9·27. It will be seen that four out of the six cases occurred during the last ten years, which were, perhaps, the driest the State has ever seen.

Dividing the period beginning with 1876 into quinquennial periods, the average yields per acre were as follow:—

Quinquennial period.	Average per acre.
1876–1880	14·90 bushels.
1881–85	14·47 ,,
1886–1890	12·46 ,,
1891–95	11·15 ,,
1896–1900	9·53 ,,
1901–05	10·18 ,,

In spite of the lower averages of certain years, it may be said that from equal qualities of soil a better yield is now obtained than that realised twenty years ago, a result due largely to improved farming, the use of fertilisers, and more economical harvesting appliances, and to the fact that rust, smut, and other forms of disease in wheat have been less frequent and less general in recent years.

If the average yield per acre be compared with the results obtained in the other States of the Commonwealth, it will be found that New South Wales occupies a satisfactory position. Below will be found the average yields obtained in each State during the last decennium. For the season ended March, 1906, New South Wales produced 30 per cent. of the total wheat yield of the Commonwealth:—

State	Area under Crop, 1906.	Yield for Season ended March, 1906.		Average Yield during ten years, 1896–1905.
		Total.	Average per acre.	
	acres.	bushels.	bushels.	bushels.
New South Wales	1,939,447	20,737,200	10·7	9·9
Victoria	2,070,517	23,417,670	11·3	8·0
Queensland	119,356	1,137,321	9·5	14·8
South Australia	1,757,036	20,143,798	11·5	5·4
Western Australia	195,071	2,308,305	11·8	11·3
Tasmania	41,319	776,478	18·8	20·1
Commonwealth	6,122,746	68,520,772	11·2	8·0

For a long time New South Wales lagged behind its neighbours, Victoria and South Australia, in wheat-growing; but for the last few years it has sown a larger area than South Australia, and is now not far behind Victoria. According to present indications, it will not be long before New South Wales is the largest producer of wheat in the Commonwealth. The quantities of wheat estimated to be yielded during the 1906-7 season are 24,034,000 bushels in New South Wales, 22,618,000 bushels in Victoria, and 20,475,000 bushels in South Australia.

AREA SUITABLE FOR WHEAT-GROWING.

If reference be made to the map at the beginning of this volume, it will be observed that two lines traverse it from north to south. Of these, the line marked by dash and circle denotes the westward limit of that part of the State which has, theoretically—(*a*) Sufficient rainfall to admit of ploughing operations being carried out at the right time; (*b*) sufficient also to cover the growing period of the wheat plant; and (*c*) sufficient rainfall during the months of September and October to fill the grain, or, in the case of districts where, notwithstanding the rains in these months are light, the deficiency is made up by the increased falls in the earlier or later months.

The line marked by dash and cross represents the westward limit of profitable wheat-growing, based upon actual results.

During the last twelve years careful records have been kept of the results of the harvest of every district of the State, and from these records of actual experience it has been possible to establish the lines thus laid down.

It is to be remembered, in discussing the crop-line, that the average crops recorded over the greater part of Riverina are below what might be obtained, as it is unfortunately true that the majority of the farmers do not get anything like the results from their land that are possible under good treatment. In many instances the land is badly prepared, the grain sown too late, the methods of harvesting wasteful (much of the grain being lost), and the use of fertilisers is not by any means general. Experts place the loss as high as 2 bushels per acre, and rarely less than 1 bushel; and it is certain that the average yields would be considerably increased with better farming conditions. In determining the crop-line, therefore, consideration was given to the poor results attributable to bad farming, as well as to losses by other preventable causes such as by rabbits, bush fires, &c.

It is, however, possible that a more rigid definition of successful farming might even exclude districts now placed within the wheat area. For example, several districts along the edge of the line, such as Tocumwal, Wagga, Temora, Young, and Parkes have been included, although results have been rather doubtful, two, and, in some cases, as many as four failures having been recorded in ten years.

In some of the northern districts within the line, much of the land is considered unsuitable for wheat-growing, consisting as it does of stony, hilly country, too rough for cultivation, and of black soil plains, which bake and crack, and present mechanical difficulties in tillage. The rich soils of river flats must also be omitted from good wheat-growing areas, as such land has a tendency to produce excessive straw growth, although excellent hay can, of course, be grown.

September and October are generally looked upon as the most critical months as regards rainfall—this being the time for the filling of the grain. Heavy soils require more rain than light soils, especially if the latter possess retentive sub-soils. The nature of the soil, as well as questions of elevation, temperature, evaporation, &c., have an important bearing on the rainfall needed for wheat and general culture, and there are few matters of more importance in regard to settling people on the land under payable conditions than the question of soil characteristics. A soil map of the State is urgently required, and this is now being prepared by the Chemist to the Department of Agriculture.

Excluding the coastal area, where wheat-growing has been practically abandoned during recent years owing to the liability to rust, the area comprised within the wheat belt and suitable for its cultivation has been estimated to cover from 20,000,000 to 25,000,000 acres.

INCREASE IN THE WHEAT YIELD.

It has been shown that the area under wheat is almost 2 million acres, which is a very insignificant portion of the total just mentioned, and even this small acreage is not worked as profitably as it might be. Experts state that with the expenditure of a comparatively small sum on manures and effective machinery and implements, and with the combination of stock with cultivation, the production from the present area could be increased by from 50 to 100 per cent. Compared with the principal wheat-growing countries of the world, an average yield of

10 bushels per acre is very small, as will be seen from the table below. The averages shown are based on the latest available returns:—

Country.	Average yield per acre.	Country.	Average yield per acre.
	bushels.		bushels.
United Kingdom	30·6	India	11·2
Germany	26·4	Russia	9·2
France	19·1	Argentine	11·0
Hungary	17·0	Canada (Ontario and Manitoba) and North-west Territories	20·0
United States	13·0		

A bare statement of averages is, however, not altogether convincing, as the relative cost of production should also be taken into consideration.

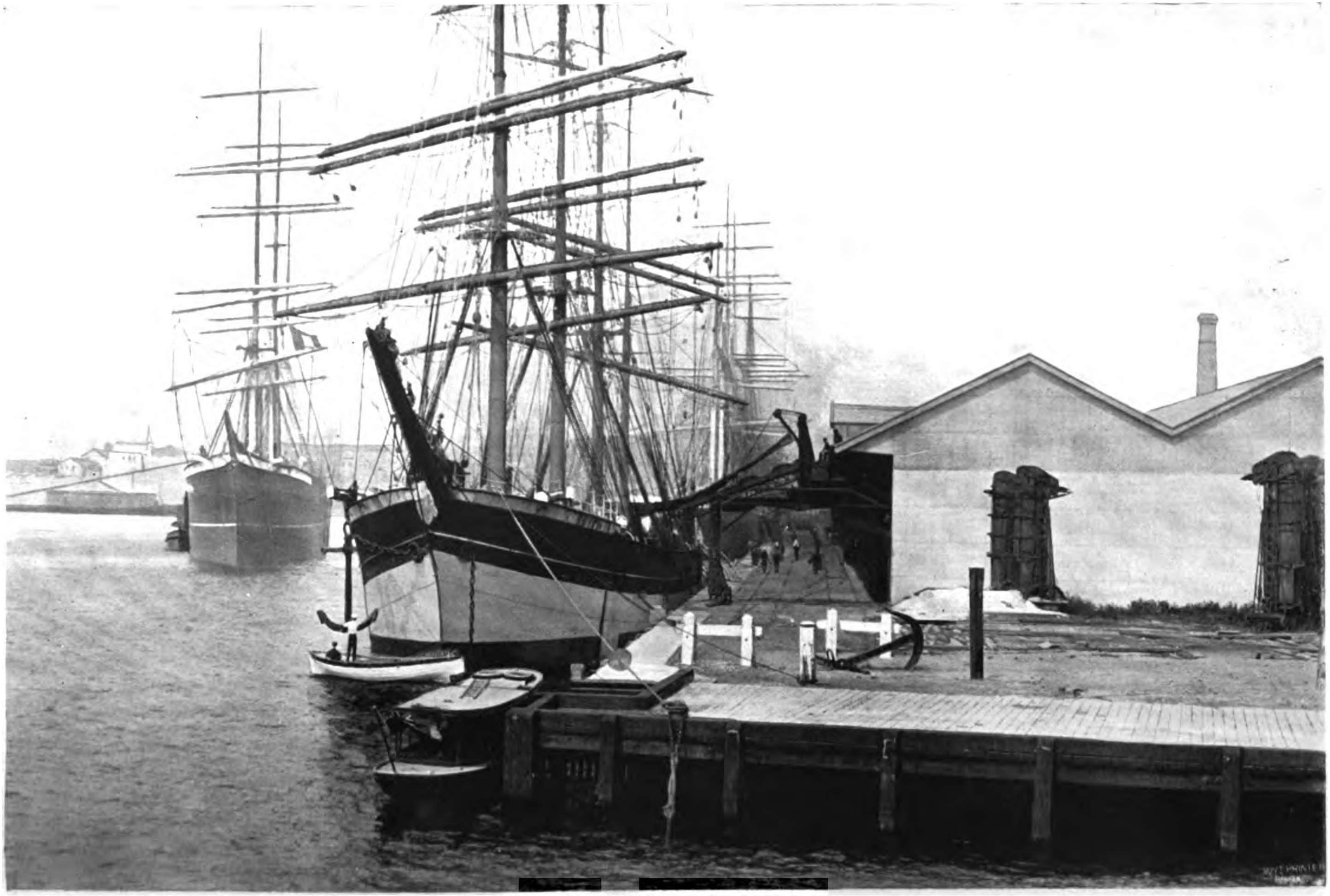
Furthermore, it must be remembered that in the older countries the efforts of farmers are more concentrated, and what is known as intense cultivation is of necessity the rule. In this State, wherever agriculturists have confined their operations to a restricted area, and have made systematic efforts to put the soil to its fullest use, their returns have been infinitely better than those obtained from imperfect cultivation of areas beyond the capacity of the holder's teams and implements.

It is not unreasonable to expect that the rough and ready methods of farming which prevail in several of the outlying districts will soon disappear, and that the yield will increase by at least 2 or 3 bushels per acre. The lack of system in farming is almost necessarily prevalent amongst pioneers in new countries. In many instances the settlers have begun with little if any capital, and with very little practical knowledge, and there are probably very few places where persons without capital could have succeeded so well.

That the possibilities of New South Wales are great must be admitted, seeing that if only a quarter of the area favourable for growing wheat were cultivated on scientific lines there would be a probable surplus of over 50,000,000 bushels available for export after satisfying all the demands of the local population. There is a very large market for breadstuffs in the United Kingdom, the average annual import during the last five years having been 190 million bushels, of which nearly 3 millions, or about one-sixty-fourth, were received from this State. Were the farmers to grow those wheats most in demand in Great Britain there should be very little of the year's crop unsold, and no fear of the local price falling so low as to be unprofitable. There is also an increasing demand for Australian wheat in the markets of the East.

In the British markets, during 1905, Australian wheat had a higher value than that from any other country, being quoted at 32s. 4d. per quarter, or 1s. 9d. per quarter higher than the Argentine grain, 8d. higher than Canadian, and 2s. 8d. higher than English. Usually it is about 2s. per quarter higher than the British.

In New South Wales, with its great areas of arable land, the necessity for the adoption of the more scientific forms of cultivation has not yet been felt. It is certain, however, that the serious foundation of an agricultural industry will lead to a better selection of seed, and to an inquiry into the best methods of cultivation. At the experimental farms at Wagga, Bathurst, and Glen Innes, experiments have been made from season to season to demonstrate the advantages of thorough tillage and the use of implements which permit of deep culture at low cost; and throughout



LOADING WHEAT FROM ELEVATOR.

the State the seed drill, and in many districts the seed and manure drill, are coming into almost general use. According to the advocates of drilling, the proper quantity to sow is 25 to 40 lb. per acre, whereas for broadcasting not less than a bushel is used, and generally rather more. The system of rotation of crops also favours an increased yield, leguminous crops supplying nitrogen to soil which has been deprived of it by cereals. For the present, however, the holders of large estates who have taken up wheat-farming will, no doubt, find it more advantageous to secure lighter crops off extensive areas with a minimum of labour.

COST OF GROWING AND EXPORTING WHEAT.

The cost of raising wheat depends entirely upon the size of the holding, for a large farm with first-class agricultural appliances can be worked at a very much lower proportionate cost than a small one. An estimate of the cost of growing wheat ought to include rent, or interest on purchase-money of land, and carriage to the point of consumption. Careful inquiries show that in New South Wales, taking all factors into account, such as the proportions of lands variously prepared and sown, the proportion of crops harvested by different methods, average railway and other freights; but excluding interest on capital, rent, &c., the cost of landing wheat in Sydney may be set down at 19d. per bushel with a 10-bushel crop. In the near future, with the increased use of improved machinery, the average cost is likely to be much reduced.

The following may be taken as representing the minimum cost of raising wheat on farms of large areas where the disc plough and drill are used:—

	10-bushel crop per acre. s.	d.
Expenses independent of returns, *i.e.*, seed, bluestone, ploughing, harrowing, sowing, and rolling (if necessary)	7	3
Expenses dependent upon the crop—stripping, winnowing, and bagging	4	9
Expenses dependent upon the situation of the land, cartage, say, 6 miles road and 200 to 300 miles train	3	4
Total	15	4

There would probably be an additional cost up to 2s. 6d. per acre on a smaller area. If a four-furrow plough be used instead of disc the cost would be about 2s. per acre more; and if the seed is broadcasted instead of drilled another 3s. 3d. per acre would be required.

Apart from the initial cost of raising the cereal, the cost of placing the wheat on the London market, from the point of production on the farm, may be set down as follows:—

Cartage to railway station (6 miles)	¾d.	per bushe
Average railway freight (300 miles)	3¼d.	,,
Expenses in port	¾d.	,,
Ocean freight (21s. 9d. per ton)	7d.	,,
Insurance, selling and other charges in London	1½d.	,,
Total	1s. 1¼d.	,,

The ocean freight quoted above is by sailing vessel, by which about three-fourths of the wheat is exported. If it is sent by steam vessel, the freight will be about 4s. or 5s. per ton more.

PRICE OF WHEAT.

The price of wheat is subject to constant fluctuation, as the following table, giving the average rates ruling in the Sydney market in the months of February and March of each year since 1865, will show. These figures exhibit clearly the tendency to a gradual reduction in the value of the cereal down to 1895, when the price was the lowest of the series. In 1896, however, owing to a decrease in the world's supplies, the price rose considerably, and led to an extension of cultivation in Australasia. Up to a few years ago, with a deficiency in the local production, the price in Sydney was generally governed by the rates obtained in the neighbouring Australian markets where a surplus was produced. These, again, are now determined by the figures realised in London, which are usually equal to those ruling in Sydney, plus freight and charges. The prices in the following table are for an imperial bushel, and, being for new wheat, are slightly below the average for the year :—

Year.	February.	March.	Year.	February.	March.	Year.	February.	March.
	per bushel. s. d.	per bushel. s. d.		per bushel. s. d.	per bushel. s. d.		per bushel. s. d.	per bushel. s. d.
1865	9 6	9 7½	1879	5 0	4 9½	1893	3 6½	3 6
1866	8 4½	8 0	1880	4 8	4 9	1894	2 11	2 8
1867	4 3	4 4	1881	4 1	4 3	1895	2 7	2 7
1868	5 9	5 9	1882	5 5	5 6	1896	4 4½	4 5
1869	4 9	4 10	1883	5 1½	5 2	1897	4 8	4 6½
1870	5 0	5 1½	1884	4 3	4 3	1898	4 0	4 0
1871	5 7½	5 9	1885	3 10½	3 7½	1899	2 7½	2 9
1872	5 0½	5 3	1886	4 3½	4 5	1900	2 9	2 8
1873	5 1	5 8½	1887	3 10	3 11	1901	2 7	2 7
1874	6 9	6 1½	1888	3 6	3 6½	1902	3 2	3 2¾
1875	4 7½	4 6	1889	4 9	5 3	1903	......	......
1876	5 1½	5 6	1890	3 6	3 6	1904	3 0½	3 0¾
1877	6 1½	6 6	1891	3 7½	3 10	1905	3 4½	3 3⅞
1878	6 1½	5 7½	1892	4 9	4 9	1906	3 1⅝	3 2¼

During recent years the price did not vary greatly in 1899, 1900, and 1901. There were no quotations in 1903, owing to the almost universal failure of that season's crop. In 1905 the figure was higher than in any year since 1898, and in 1906 the price was still high, but below that of 1905.

CONSUMPTION OF WHEAT.

New South Wales was for many years largely dependent on external supplies to meet her demands for wheat consumption, and it was not until 1898 that for the first time the production exceeded the consumption, and there was an apparent surplus of 1,123,000 bushels. Since then there have been deficiencies in 1899 and 1903. The apparent annual consumption per head of population ranges from 5·9 bushels in 1891 and 1905 to as much as 10·5 bushels in 1904. In the earlier years of the State the consumption appears to have been generally much higher than at the later periods; but the quality of the yield was inferior in the initial stages of wheat-growing, and the produce used as human food varied according to the preponderance of wheat unfit for milling purposes. In more recent years occasional advances in the average may in like manner be ascribed to this cause, while the consumption is also affected by the state of the maize market, short supplies leading to a larger demand for wheat as food for poultry, pigs, etc.

During the last ten years the Government agricultural experts have been endeavouring to determine the varieties of wheat most suitable for the various districts, and to breed new types which would return the best milling results under New South Wales conditions. It is very gratifying to record that their efforts have been attended with marked success.

The statement below shows during each of the last sixteen years the net export or import of breadstuffs from the State, and the apparent consumption, including wheat required for seed. Flour has been converted into grain, 50 bushels of wheat being taken as equivalent to 1 ton of flour:—

Year.	Wheat Crop, Year ended 31st March.	Year ended 31st December.		Apparent Consumption including Grain for Seed.	
		Net Export.	Net Import.	Total.	Per Head.
	bushels.	bushels.	bushels.	bushels.	bushels.
1890	6,570,335	....	1,867,381	8,437,716	7·7
1891	3,649,216	....	3,140,687	6,789,903	5·9
1892	3,963,668	.. ..	3,203,704	7,167,372	6·1
1893	6,817,457	....	1,708,523	8,525,980	7·1
1894	6,502,715	....	1,824,575	8,327,290	6·8
1895	7,041,378	....	1,226,031	8,267,409	6·7
1896	5,195,312	....	3,588,406	8,783,718	6·9
1897	8,853,445	....	622,912	9,476,357	7·3
1898	10,560,111	1,122,758	....	9,437,353	7·2
1899	9,276,216	....	2,126,453	11,402,669	8·6
1900	13,604,166	3,513,112	....	10,091,054	7·5
1901	16,173,771	7,702,072	....	8,471,699	6·2
1902	14,808,705	2,774,782	....	12,033,923	8·6
1903	1,585,097	....	6,919,765	8,504,862	6·0
1904	27,334,141	12,207,661	....	15,126,480	10·5
1905	16,464,415	7,695,496	....	8,768,919	5·9

MAIZE.

Maize ranks second in importance amongst the crops of New South Wales; but it is not now of anything like the importance of wheat, although thirty years ago there was very little difference in the area under each cereal. In 1880 the area under maize was half that under wheat; now it is less than one-tenth.

The cultivation of maize is carried on chiefly in the valleys of the coastal rivers, where both soil and climate are peculiarly adapted for its growth. On the tableland also its cultivation is attended with good results, but as the land rises in elevation so does the average yield per acre proportionately decrease, although in compensation the grain produced is of more enduring quality for export and storage. The following statement shows the distribution of the area under maize for grain during 1905, with the production and average yield in each district:—

District.	Area under Maize for Grain.		Yield.	
	Total.	Proportion.	Total.	Average per acre.
Coastal—	acres.	per cent.	bushels.	bushels.
North	77,782	41·1	2,603,230	33·5
Hunter and Manning	39,225	20·7	1,138,069	29·0
Cumberland	4,878	2·6	120,396	24·7
South	15,094	7·9	462,344	30·6
	136,979	72·3	4.324,039	31·6
Tableland—				
Northern	17,556	9·3	505,455	28·8
Central	9.912	5·2	217,153	21·9
South	2.243	1·2	28.569	12·7
	29,711	15·7	751.177	25·3
Western Slopes.........	22,270	11·8	461,402	20·7
Western Plains and Riverina	393	·2	3.132	8·0
New South Wales	189,353	100·0	5,539,750	29·3

The North Coast is by far the most important maize-growing district in the State, having yielded in 1905 nearly one-half the total production, while the average yield, 33·5 bushels per acre, was also the highest. After the North Coast, the Hunter and Manning District shows the largest area under crop, although the South Coast gave the second highest average yield. The highest average yield in any county was in Cook, on the central tableland, with 43 bushels per acre. On the North Coast, the best counties were Raleigh and Dudley, which both gave over 39 bushels per acre. In 1905 the average yield on the tableland and western slopes was over 20 per cent. below that on the coast. At an earlier period of the history of the north coast maize displaced wheat as a product, but latterly its culture has been to some extent abandoned in favour of dairying and sugar-growing.

The next statement shows the area under maize in each year since 1886, together with the total production and average yield:—

Year.	Area under Maize for Grain.	Production.		Year.	Area under Maize for Grain.	Production.	
		Total.	Average per acre.			Total.	Average per acre.
	acres.	bushels.	bushels.		acres.	bushels.	bushels.
1886	146,957	3,825,146	26·0	1898	193,286	6,064,842	31·4
1887	171,662	4,953,125	28·9	1899	214,697	5,976,022	27·8
1888	166,101	4,910,404	29·6	1900	206,051	6,292,745	30·5
1889	173,836	5,354,827	30·8	1901	167,333	3,844,993	23·0
1890	191,152	5,713,205	29·9	1902	202,437	3,049,269	15·1
1891	174,577	5,721,706	32·8	1903	226,834	6,836,740	30·1
1892	167,549	5,037,256	30·1	1904	193,614	4,951,132	25·6
1893	205,885	7,067,576	34·3	1905	189,353	5,539,750	29·3
1894	208,308	5,625,533	27·0				
1895	211,104	5,687,030	26·9	Average for 20 years ended 1905			28·4
1896	211,382	5,754,217	27·2	,, 10 ,, 1895			29·7
1897	209,588	6,713,060	32·0	,, 10 ,, 1905			27·3

During the last twenty years there have been several fluctuations in the area under cultivation, but on the whole the increase has been small, amounting to only about 29 per cent., and considered in the light of the general advance of settlement, particularly in those districts where it may be successfully cultivated, the progress has been slow. Since 1890 there has been no advancement, the area under cultivation in 1905 being actually 2,000 acres less than in 1890. The yield per acre is somewhat variable, ranging from 15·1 bushels in 1902 to 34·3 bushels in 1893, and generally the tendency has been for the average to decrease, owing to the reduction of the area in the coastal district, where the average yield is highest. In the most favourable localities yields of 80 to 100 bushels per acre are by no means uncommon. There are probably few places better suited for the growth of maize than the coastal districts of New South Wales.

Up to 1890 the State produced more maize than could be locally consumed, and exported a small quantity to her southern neighbours, but every year since, with one exception, as will be seen from the statement below, there has been a net import ranging from 9,883 bushels in 1898 to 1,476,704 bushels in 1903. Practically nothing has been done to develop an oversea export trade, although maize is apparently growing in favour in the United Kingdom and Europe:—

Year.	Net Import of Maize	Year.	Net Import of Maize.
	bushels.		bushels.
1890	532,910	1898	9,883
1891	273,160	1899	357,401
1892	305,623	1900	380,638
1893	154,571	1901	210,569
1894	46,294	1902	1,218,668
1895	39,807*	1903	1,476,704
1896	48,630	1904	366,758
1897	232,419	1905	353,002

* Net export.

This experience of a net import each year is rather curious, and not easily accounted for. There is no doubt that the uncertainty as to the price that will be realised for maize, an uncertainty that is shared with all produce grown only for local consumption, has caused the cultivation of this cereal to go out of favour on the coast and tableland, while on the other hand the profit to be obtained from dairying has led to its further neglect. It is possible, however, that the development of the pig-raising and bacon-curing and poultry industries as adjuncts to dairying may lead to an increased demand, and the maize-grower will have more encouragement to increase his production. Another possible reason for the decline is the small attention that has been paid to the cereal. During recent years wheat has received very close study as to the kinds suited to various localities and climatic conditions, and as to improvements in cultivation and harvesting, but maize has received little, if any, consideration. The falling tendency of the average yield shows also that the land has been drawn upon to too great an extent.

OATS.

The cultivation of oats has been much neglected in New South Wales, though the return has been fairly satisfactory, and the deficiency between the production and the consumption is very considerable. The elevated districts of Monaro, Argyle, Bathurst, and New England contain large areas of land where the cultivation of oats could be carried on with good results.

The cereal is cultivated as a grain crop, principally in the wheat-growing districts; and as it is essentially a product of cold climates, it thrives best in those parts of the country which have a winter of some severity. The principal districts where oats are grown are the tableland, the South-western Slope, and Riverina. The area under crop for grain in 1905 was 38,543 acres, which produced 883,081 bushels, or 22·9 bushels, per acre. The northern tableland gave the best average, with 28·8 bushels per acre. In the tableland division 12,814 acres were under crop, which yielded 297,541 bushels, or 23·2 per acre; on the South-western Slope, 8,872 acres gave 215,249 bushels, or 24·3 per acre; while in the Riverina the production was 280,317 bushels from 12,205 acres, or 23·0 bushels per acre. These three divisions accounted for about 90 per cent. of the total production. In the remainder of the State there were only 4,652 acres under cultivation, which yielded 89,974 bushels.

The following table illustrates the progress in the cultivation of oats for grain during the last twenty years:—

Year.	Area under Oats for Grain.	Production.		Year.	Area under Oats for Grain.	Production.	
		Total.	Average per acre.			Total.	Average per acre.
	acres.	bushels.	bushels.		acres.	bushels.	bushels.
1886	23,947	600,892	25·1	1898	19,874	278,007	14·0
1887	19,393	394,762	20·4	1899	29,125	627,904	21·6
1888	7,984	109,931	13·8	1900	29,383	593,548	20·2
1889	22,358	543,330	24·3	1901	32,245	687,179	21·3
1890	14,102	256,659	18·2	1902	42,992	351,758	8·2
1891	12,958	276,259	21·3	1903	51,621	1,252,156	24·3
1892	20,890	466,603	22·3	1904	40,471	652,646	16·1
1893	34,148	701,803	20·6	1905	38,543	883,081	22·9
1894	30,636	562,725	18·4				
1895	23,750	374,196	15·8	Average for 20 years ended 1905			19·5
1896	39,530	834,633	21·1	„ 10 „ 1905			19·0
1897	28,605	543,946	19·0				

The area under oats for grain, with slight fluctuations, remained practically stationary until 1893, when over 13,000 acres were added. Since then, with variations due to the seasons, the area has slightly increased. The largest area in any year was in 1903 when it reached 51,621 acres. The yield varies considerably, but in a fair season exceeds 20 bushels per acre. During the last ten years the average was 19·0 bushels. The lowest yield was 8·2 bushels per acre in 1902, and the highest 24·3 bushels in 1903. In 1902 the crop almost failed owing to the unfavourable season.

The market for oats is chiefly in the metropolitan district, and the demand depends mainly on the price of maize. The production is far from satisfying the wants of the State, and large quantities are imported each year from Victoria, Tasmania, and New Zealand. The following statement shows the net import of oats during the last ten years, including oatmeal expressed in its equivalent of oats—100 bushels of oats to 1 ton of oatmeal:—

Year.	Net import of Oats.	Year.	Net import of Oats.
	bushels.		bushels.
1896	1,013,768	1901	986,882
1897	814,633	1902	1,560,541
1898	1,021,329	1903	1,388,710
1899	1,837,142	1904	622,304
1900	1,187,529	1905	897,775

It is apparent that much yet remains to be done before the State can be independent of outside assistance, but there is strong reason to believe that as agricultural settlement is developed on the northern tableland this cereal will receive more attention.

BARLEY.

Barley, although an important crop, is produced in comparatively small quantities in New South Wales. It has been demonstrated that barley grown in several parts of the State where the essential conditions of sweet, well-drained soil exist, is particularly suited for malting, and an effort has been made by brewers during the last few years to induce a more extensive cultivation in those districts which are best fitted for the production of the malting varieties.

During 1904 the area under barley for grain was 14,930 acres, which yielded 266,781 bushels, or 17·9 per acre. These were both the largest area and the highest yield. In 1905 there was a great falling-off, the area decreasing to 9,519 acres. Of this area, 6,902 acres were reaped for malting barley, and 2,617 for other varieties. The greater part of this cereal is grown in the Tamworth district, on the north-western slope, the area in that district being 6,136 acres, the bulk of which was for malting barley. No other district stands out prominently, there being only small areas under crop in each. The following statement shows the area under barley for grain, and the production in each year since 1886 :—

Year.	Area under Barley for Grain.	Production.		Year.	Area under Barley for Grain.	Production.	
		Total.	Average per acre.			Total.	Average per acre.
	acres.	bushels.	bushels.		acres.	bushels.	bushels.
1886	6,079	132,919	21·9	1898	4,459	64,094	14·4
1887	4,402	84,533	19·2	1899	7,154	132,476	18·5
1888	3,318	36,760	11·1	1900	9,435	114,228	12·1
1889	5,440	113,109	20·8	1901	6,023	103,361	17·2
1890	4,937	81,383	16·5	1902	4,557	18,233	4·0
1891	4,459	93,446	21·0	1903	10,057	174,147	17·3
1892	4,618	91,701	19·9	1904	14,930	266,781	17·9
1893	6,113	114,272	18·7	1905	9,519	111,266	11·7
1894	10,396	179,348	17·3				
1895	7,590	96,119	12·7				
1896	6,453	110,340	17·1	Average for 20 years ended 1905...			16·4
1897	5,151	99,509	19·3	,, 10 ,, 1905...			15·4

The area under barley varied little during the twenty years prior to 1886. In 1894 it exceeded 10,000 acres, but declined again next year. From 1895 to 1902 it fluctuated between 4,000 and 9,000 acres. In 1903 it was just over 10,000 acres, and in 1904 reached its highest point with about 15,000 acres. The yield has only been fairly satisfactory, the average ranging from 4 in 1902 to 21·9 bushels in 1886. In 1902 the crop practically failed. The average during the last ten years was 15·4 bushels per acre. When care is taken by the farmers to thresh out the grain in accordance with the requirements of maltsters, the price offered is remunerative, and there ought to be sufficient inducement for the producer to fulfil the local demand for barley which at present has to be met by importations from New Zealand. The net imports of barley and malt into New South Wales during the last ten years have been as follows:—

Year.	Net Import.		Year.	Net Import.	
	Barley.	Malt.		Barley.	Malt.
	bushels.	bushels.		bushels.	bushels.
1896	44,414	336,791	1901	74,743	497,229
1897	45,514	378,163	1902	214,141	356,639
1898	33,627	438,116	1903	223,728	304,733
1899	115,966	422,272	1904	123,680	327,818
1900	63,910	387,388	1905	21,834	275,833

RYE.

Rye is only a minor crop in New South Wales, the total area under cultivation for grain in 1905 being 4,459 acres, which, with the exception of 4,912 acres in 1903, is the largest ever grown. The production was 49,019 bushels, or 11·0 per acre. The average yield during the last ten years was 12·4 bushels per acre, the best year being 1903, with an average of 16·3, and the worst, 1904, with 9·6. The place filled by rye in the countries of the Old World is taken by macaroni wheat in this State. It is, however, grown either alone or in combination with leguminous crops as green food for dairy cattle. Nearly the whole of the rye for grain is grown on the tableland, principally in the central portion.

BROOM MILLET.

Broom millet is another minor crop, but at the same time a valuable one, the return from the fibre alone amounting to £32,000 in 1905, the average return being £27 6s. per ton. In 1905 the area under broom millet was 3,765 acres, from which 23,439 cwt. of fibre and 30,635 bushels of grain were obtained, the averages being 6·3 cwt. and 11·6 bushels respectively per acre. Particulars of this crop have been recorded only during the last five years, and the average return during that period was 6·4 cwt. per acre. In 1900 and 1903 the averages exceeded 8 cwt. per acre. The greater part of the crop is grown in the Hunter River Valley and in the valleys of the northern coastal rivers.

HAY.

In addition to the areas threshed for grain, considerable quantities of wheat, oats, barley, and lucerne are grown, for the purpose of being converted into hay for farm stock, or chaff for town requirements. The area cut for hay is increasing, although it is to a great extent dependent on the fitness of the crops to be reaped for grain. The following statement shows the area under each crop for hay during the last six years, together with the total production and the average return per acre:—

Crop.	1900.	1901.	1902.	1903.	1904.	1905.
AREA.						
	acres.	acres.	acres.	acres.	acres.	acres.
Wheat	332,143	312,858	326,588	286,702	284,367	313,582
Oats	96,105	96,833	131,891	159,828	107,805	88,495
Barley	904	981	1,782	1,242	1,285	2,397
Lucerne	37,084	31,491	37,657	48,245	42,247	33,562
PRODUCTION.						
	tons.	tons.	tons.	tons.	tons.	tons.
Wheat	347,743	286,793	75,892	452,484	207,439	304,714
Oats	92,749	120,415	99,069	250,930	82,166	93,522
Barley	1,263	1,187	984	1,959	1,111	1,856
Lucerne	84,505	64,226	67,434	111,437	75,577	59,090
AVERAGE PRODUCTION PER ACRE.						
	tons.	tons.	tons.	tons.	tons.	tons.
Wheat	1·0	·9	·2	1·6	·7	1·0
Oats	1·0	1·2	·8	1·6	·8	1·1
Barley	1·4	1·2	·6	1·6	·9	0·8
Lucerne	2·3	2·0	1·8	2·3	1·8	1·8

More than 70 per cent. of the total area under cultivation for hay is taken up by the area under wheaten hay. Up to 1894 the cultivation of wheat for hay increased in a much greater ratio than that for grain. During the last eight years, when the great expansion in wheat cultivation has taken place, there has not been much difference in the ratio of increase for grain and for hay.

Oaten hay is grown in parts of the State where the climate is not suitable for maturing the grain, but, in any case, the price obtained for the hay is usually so profitable that the cultivation of oats for thrashing is neglected. The area under barley for hay is not large. Lucerne hay is always in good demand, and sells readily at remunerative prices. It is grown chiefly on the river flats of the Hunter and Manning district, the central tableland, and the north-western slope. It gives the best return of all the crops grown for hay, the average yield during the last ten years having been 2·1 tons per acre, as against 1 ton of barley, 1 ton of oats, and ·8 tons of wheat. In favourable districts, where it has received proper attention, it grows so rapidly that as many as eight crops in the course of a year have been reaped, each averaging about 1 ton per acre.

A series of dry seasons in some measure accounts for the increased area devoted to hay since 1896, but the steady demand for hay and chaff, wheaten as well as oaten, and the large import of this produce, fully justify an extension of its cultivation. The net imports of hay and chaff during the last ten years have been as follows:—

Year.	Net import of Hay and Chaff.	Year.	Net import of Hay and Chaff.
	tons.		tons.
1896	48,473	1901	14,665
1897	41,035	1902	293,810
1898	58,550	1903	116,241
1899	131,609	1904	22,699
1900	31,160	1905	41,890

It will be seen that there is a large difference between the demand for hay and the local production; but most of these importations were intended for consumption in the metropolitan district.

GREEN FOOD AND SOWN GRASSES.

The cultivation of maize, oats, barley, sorghum, millet, rye, and other cereals, as well as lucerne, rape, and grasses, for green food, has largely increased during recent years, owing to the expansion of the dairying industry. Artificial grasses have received more or less attention for many years, but it is largely in the northern and southern coastal districts where dairy-farming is carried on, that the practice of sowing grasses has been followed. There is also a considerable area sown on the central tableland, and to a less extent on the northern and southern portions, and in some parts of the Murray Valley, but in the other divisions the area is small. Twenty-six years ago the area under permanent artificially-sown grasses was about 80,000 acres, whereas in 1905 it had increased to 627,500 acres. The cultivation of green foods is necessary in districts where the supply of natural grasses is meagre, or where the naturally nutritious herbage has perished and been replaced by noxious weeds. In such cases, lucerne, sorghum, &c., are grown as supplementary crops. The following statement shows, during the last twenty years, the increase in the area cultivated for green food and sown with artificial grasses:—

Year.	Area cultivated for Green Food.	Area sown with Permanent Grasses.	Year.	Area cultivated for Green Food.	Area sown with Permanent Grasses.
	acres.	acres.		acres.	acres.
1886	27,817	138,003	1896	74,788	384,016
1887	20,403	192,678	1897	62,145	376,402
1888	28,476	200,332	1898	81,771	348,829
1889	27,916	217,403	1899	76,935	378,852
1890	37,473	388,715	1900	78,144	422,741
1891	32,138	333,238	1901	113,060	467,839
1892	44,424	361,280	1902	109,146	477,629
1893	43,506	302,412	1903	77,093	552,501
1894	50,029	362,578	1904	87,718	607,997
1895	66,833	300,862	1905	95,058	627,530

Lucerne is grown in considerable quantities in the Hunter River flats, and the cultivation of this fodder is extending throughout the country, principally along the banks of the rivers on the western slope of the Dividing Range. In the far western pastoral districts attempts have been made to cultivate lucerne under irrigation, and these have met with marked success. As many as 75 sheep per acre were fed for four or five months, during the last bad season, with lucerne grown on land irrigated with water from the Lachlan River while at its lowest level. During 1905 there were 40,725 acres grown for green food, and if these be added to the area previously shown as being under hay, viz., 33,562 acres, there were altogether 74,287 acres under this form of cultivation. In the United States and Argentine, where experiments have proved that it will succeed, lucerne is superseding the indigenous grasses.

ENSILAGE.

Although the value of ensilage as fodder for cattle is generally acknowledged, this valuable method of preserving green foods is not so extensively practised as it should be in a country liable to long periods of dry weather, as is the case with New South Wales. The development attained by the industry has been so slight that an extended notice is not called for; it may suffice to say that the use of ensilage, although slight, is fairly general, except on the central-western slope and in the great western division, where it would seem to be most required. During 1905 the total production of ensilage was 9,321 tons, of which 1,928 tons were made on the south-western slope, and 3,650 tons on the central-western plain.

POTATOES.

The cultivation of the potato has progressed very slowly, notwithstanding that there are many places in the State well suited for its growth. The bulk of the production is on the tableland, especially in the central portion, where, in 1905, there were 11,072 acres under cultivation. One county, Bathurst, had 7,828 acres, or nearly one-third of the whole area in the State devoted to potatoes. After the tableland, the coastal district grows the largest crop. The highest average, 2·8 tons per acre, was returned by the northern tableland, after which came the south coast with 2·7. The following statement shows the area under cultivation, and the production during the last twenty years:—

Year.	Area under crop.	Production.		Year.	Area under crop.	Production.	
		Total.	Average per acre.			Total.	Average per acre.
	acres.	tons.	tons.		acres.	tons.	tons.
1886	17,322	45,803	2·6	1898	27,978	61,900	2·2
1887	20,915	61,455	2·9	1899	34,968	81,337	2·3
1888	15,419	36,839	2·4	1900	29,408	63,253	2·2
1889	17,551	50,096	2·9	1901	26,158	39,146	1·5
1890	19,406	52,791	2·7	1902	19,444	30,732	1·6
1891	22,560	62,283	2·8	1903	20,851	56,743	2·7
1892	18,502	52,105	2·8	1904	23,855	48,754	2·0
1893	26,559	83,838	3·2	1905	26,374	50,086	1·9
1894	30,089	86,170	2·9				
1895	24,722	56,179	2·3				
1896	31,170	84,214	2·7	Average for 10 years ended 1895...			2·8
1897	23,816	55,332	2·3	,, 10 ,, 1905...			2·2

The year 1894 saw a marked increase in cultivation, and the area planted in that year, 30,089 acres, was the largest up to that time. Since 1895 the area has fluctuated, reaching the maximum point with 34,968 acres, in 1899. It has since declined, and in 1905 only amounted to 26,374 acres.

The average yield during the last ten years was 2·2 tons per acre, the highest being 2·7 tons per acre, in both 1896 and 1903. At present New South Wales has to make up by importation from the other States, chiefly Victoria and Tasmania, a considerable deficiency, which amounted to 42,118 tons in 1905, or about 50 per cent. of the total consumption for the year. The statement below shows the net import of potatoes during the last ten years:—

Year.	Net import of Potatoes.	Year.	Net import of Potatoes.
	tons.		tons.
1896	39,371	1901	42,628
1897	49,341	1902	50,284
1898	19,646	1903	62,083
1899	58,384	1904	73,044
1900	49,299	1905	42,118

The reason for the slow progress in the cultivation of potatoes lies largely in the cost of carriage to market, as compared with the cheap water transport from Victoria and Tasmania. Some few years ago the coast districts produced large quantities of potatoes, but the cultivation was given up owing to the prevalence of pests, which devastated the crops year after year, and the remedy for which was at the time unknown.

MINOR ROOT CROPS.

The cultivation of root crops other than potatoes calls for little mention, as only 800 acres were planted with onions, turnips, mangold-wurzel, and carrots. The largest area was under onions, namely, 521 acres, which yielded 1,646 tons, or 3·2 tons per acre. The best returns were given in the Bathurst district, on the central tableland, where the average yield was 5 tons per acre. The probable reason for the small attention paid to the growth of onions is the uncertainty as to the price to be obtained for the product, as there is no lack of soil suited to its cultivation. Large importations are necessary each year to meet the local demand, and during the last three years these averaged 10,203 tons per annum.

Turnips, during 1905, gave a total production of 994 tons from 226 acres. Mangold-wurzel only showed 39 acres under cultivation, which yielded 323 tons. In some of the more elevated dairying districts, mangold-wurzel is now being grown as winter fodder for cattle. Carrots were only grown to the extent of 14 acres, which produced 70 tons. In addition to the above, there were 4 acres reported as being under arrowroot, the return from which was valued at £130. Excellent results in the cultivation of arrowroot have been obtained at the Wollongbar experimental farm, near Lismore.

TOBACCO.

Tobacco growing has been established for many years in New South Wales, but the production has fluctuated to a considerable degree. Both the soil and climate of the State are well fitted for the growth of the tobacco-plant, but as it demands for its proper cultivation special knowledge on the part of the grower, it is not so largely cultivated as it otherwise might be.

Originally the plant was cultivated chiefly in the agricultural districts of the county of Argyle and the Hunter River Valley, but it has now been entirely abandoned there, and the little that is grown is found in the northern and southern portions of the western slope and on the central tableland. The following statement shows the cultivation of tobacco during each of the last twenty years :—

Year.	Area.	Production.		Year.	Area.	Production.	
		Total.	Average per acre.			Total.	Average per acre.
	acres.	cwt.	cwt.		acres.	cwt.	cwt.
1886	1,203	13,642	11·3	1898	1,405	12,706	9·0
1887	2,371	23,465	9·9	1899	546	6,641	12·2
1888	4,833	55,478	11·5	1900	199	1,905	9·6
1889	3,239	27,724	8·6	1901	182	1,971	10·8
1890	1,148	14,021	12·2	1902	317	2,604	8·2
1891	886	9,314	10·5	1903	407	5,320	13·1
1892	848	8,344	9·8	1904	752	5,015	6·7
1893	854	10,858	12·7	1905	809	7,327	9·1
1894	716	8,132	11·4				
1895	1,231	10,548	8·6				
1896	2,744	27,468	10·0	Average for 20 years ended 1905			10·1
1897	2,181	19,718	9·0	,, 10 ,, ,, 1905			9·5

For seven or eight years prior to 1888 the area under cultivation grew steadily, until in that year it reached the highest figure it has ever attained, namely, 4,833 acres. As however, the local product did not compare favourably with the American leaf, it could not be exported profitably, so that a large proportion of the crop remained upon the farmers' hands, and as the quantity sold realised very unsatisfactory prices, many growers abandoned the cultivation of tobacco in favour of other crops. With the accumulation of stocks of leaf, and the fall in the price of the local product, the area under the plant and the resultant yield declined rapidly, until in 1894 the acreage was only 716. During the next two years there was a little more activity, and the area increased to 2,744 acres in 1896; it, however, fell away again after that year, and in 1901 only amounted to 182 acres. During the last three years the area has again increased, owing to the increased attention paid to the curing of the leaf. One large firm of tobacco manufacturers has lately endeavoured to stimulate the industry by offering good prices for suitable leaf.

In view of the fact that few countries are better favoured than New South Wales with climate and soil necessary for successful cultivation, it is a matter for regret that the industry has not made more satisfactory progress. This has been due partly to the producer, and partly to the market. With an improvement in the quality of the leaf, the local consumption could be rapidly overtaken and an export trade promoted. Tobacco of excellent quality has been produced, but the bulk of it is now grown by the Chinese, who consider weight before quality, and an inferior leaf is the consequence. There is, therefore, ample scope for improving the quality of the product sufficiently to satisfy the local consumer.

An impression has prevailed that it is not possible to produce tobacco of high quality in New South Wales. This probably arose from experience of a product, which, possibly, was grown in unsuitable soil, and was characterised by a lack of care in cultivation. During the last two or three years excellent tobacco has been grown at Ashford, and in the Inverell district generally, under the guidance of a departmental expert. There seems to be no doubt that it is possible to grow in the State a tobacco well suited to the English market, and if a regular supply were available, properly fermented and packed, a large trade might be developed.

CANE SUGAR.

Sugar-cane was grown as far back as 1824, but it was not until 1865 that anything like systematic attention was given to the matter. In that year experiments were carried out on the Clarence, Hastings, Manning, and Macleay Rivers, which proved successful, and were followed by more extensive planting. The district last mentioned may be considered as the principal seat of the industry during its earlier stages; but it proved to be unsuitable to the growth of the cane, and the risk of failure from frosts compelled the planters to keep more to the north. In a few years the richest portions of the lower valleys of the Clarence, the Richmond, the Tweed, and the Brunswick, were occupied by settlers engaged in planting and growing the cane. Mills were erected in the chief centres of cane-cultivation, and cane-growing and sugar-manufacturing are now well-established industries in the north-eastern portions of the State.

Although frosts are not altogether unknown even on the Tweed, the soil and climate of the valleys of the northern rivers are in most respects well adapted to the successful cultivation of the sugar-cane, and it is confined principally to the valleys of the Richmond, Tweed, and Clarence Rivers. Nearly the whole of the area under crop lies within the counties of Rous, Clarence, and Richmond.

The following table shows the progress of this industry since 1863, when only 2 acres were recorded as being under cultivation. As sugar-cane is not an annual crop, the area under cultivation has been divided, as far as practicable, into productive and non-productive, the former representing the number of acres upon which cane was cut during the season, and the latter the area over which it was unfit for the mill, or allowed to stand for another year. Taking one year with another the area cut for cane represents about one-half of the total area planted :—

Year.	Area.			Production of Cane.	
	Productive.	Non-productive.	Total.	Total.	Average per acre.
	acres.	acres.	acres.	tons.	tons.
1863	......	......	2	....	......
1864	......	......	22	....	......
1865	......	......	141	....	......
1870	1,475	2,607	4,082	....	......
1875	3,654	2,800	6,454	....	......
1880	4,465	6,506	10,971	121,616	27·2
1885	9,583	6,835	16,418	239,347	25·0
1886	5,915	9,202	15,117	167,959	28·4
1887	8,380	6,907	15,287	273,928	32·7
1888	4,997	10,284	15,281	110,218	22·1
1889	7,348	11,382	18,730	168,862	23·0
1890	8,344	12,102	20,446	277,252	33·2
1891	8,623	13,639	22,262	185,258	21·5
1892	11,560	15,191	26,751	264,832	22·9
1893	11,755	16,357	28,112	252,606	21·5
1894	14,204	18,705	32,909	264,254	18·6
1895	14,398	18,529	32,927	207,771	14·4
1896	18,194	12,859	31,053	320,276	17·6
1897	12,936	12,929	25,865	269,068	20·8
1898	14,578	10,181	24,759	289,206	19·8
1899	9,435	13,082	22,517	170,509	18·1
1900	10,472	11,642	22,114	199,118	19·3
1901	8,790	12,019	20,809	187,711	21·4
1902	8,899	11,402	20,301	183,105	20·6
1903	10,405	9,814	20,219	227,511	21·9
1904	9,772	11,753	21,525	199,640	20·4
1905	10,313	11,492	21,805	201,998	19·6

The figures contained in the above table show the gradual progress of the sugar-growing industry from the small beginnings of 1863. From the starting point of this cultivation there was but one single break (that of 1875) in the yearly increase of land put under cane until 1884. During the four succeeding years there was, however, a retrograde tendency, and the area cultivated in 1888 was less by 2,236 acres than that cultivated in 1884. The low price of the product and the disturbed state of the markets of the world a few years ago forced the sugar manufacturers to correspondingly reduce the price offered for the cane, and so caused, for a time, the abandonment of this cultivation by the small farmers, who found in the growth of maize less variable results for their labour.

In 1889 there was an increase in the area under cane of 1,213 acres, and the next six years saw further increases, until the largest area ever recorded, 32,927 acres, was seen in 1895. In 1895 alterations were made in the Customs tariff as regards sugar, and also about that time there were great developments in the dairying industry on the northern rivers, both of which helped to withdraw attention from sugar-planting. After 1895 the area under cane steadily declined for five years, until in 1900 there were only 22,114 acres under cultivation. Since 1900 the area has remained practically stationary at a little over 20,000 acres. In 1896 the record production of 320,276 tons of cane was obtained; but the average production per acre was only 17·6 tons—with the exception of that of 1895 and of 1884, the lowest yield returned. The cane disease which was prevalent, principally on the Clarence, accounts for the low averages during the period 1894-96, while in 1895 the crop was also damaged by frost. The comparatively low yields of 1898-1900 were due to unfavourable seasons. The area of cane cut during 1905 was 10,313 acres, with a total yield of 201,998 tons, or an average of 19·6 tons per acre. During the last ten years the average was 19·8 tons per acre, and during the last five years 20·8 tons per acre.

The county of Rous is the principal centre of sugar-cane cultivation, containing 515 holdings, covering 11,959 acres, devoted to the production of sugar—an area comprising more than half of the total acreage in the State under cane crops. The yield obtained from 5,763 acres of productive cane amounted to 106,917 tons, showing an average of 18·6 tons per acre. In the county of Clarence there are 477 holdings on which cane is grown, the aggregate area being 7,065 acres. In this, as in the other sugar-growing counties, the majority of the farmers cultivate sugar-cane in addition to other crops, or in conjunction with dairying, and only a few estates are entirely devoted to its production. Some planters have areas of 25 to 100 acres in extent under cane; but their number is limited. The yield in the county of Clarence last season was 74,515 tons, or an average of 21·5 tons per acre, cut on an area of 3,470 acres. In the county of Richmond the holdings under sugar-cane number 121, and aggregate 2,781 acres, of which 1,080 acres were cut, giving a total yield of 20,566 tons of cane, or an average of 19·0 tons to the acre. The total number of holdings on which sugar-cane was cultivated was 1,113.

Sugar-cane is generally cut in the second year of its growth, the fields being replanted after they have given crops for three or four seasons at the most; and, as the planting of cane has been conducted at irregular intervals, it has chanced that seasons of large production have been followed by small crops in the succeeding year. This accounts for the alternately large and small areas of productive cane during many years, as shown in the preceding table. Sugar-manufacturers invariably purchase the year's crop of cane standing, and cut it at their own cost. From plantations in full bearing the average weight of the cane cut varies from 25 to 32 tons, while the price paid varies from 8s. to 13s. per ton. Until comparatively recently the field work on the sugar plantations of New South Wales was performed entirely by white labour, and even in 1901, when the Federal legislation in connection with the sugar industry was passed, the number of blacks employed was not large. At the Census of 1901 there were 239 Hindoos and 291 Pacific Islanders working on the sugar plantations.

The duty on imported cane sugar is £6 per ton, while the excise duty is fixed at £3 per ton; but a bounty of from 4s. to 5s. per ton of cane, calculated according to its sugar contents (equal to £2 per ton of sugar), is allowed on Australian sugar grown by white labour, the bounty being paid to the grower. The employment of white against black labour is thus protected to the extent of £2 per ton of sugar, equal to about 4s. 5d. per ton of cane. After 1st January, 1907, the excise duty will be increased to £4 per ton and the bounty to 6s. per ton of cane, calculated on cane giving 10 per cent. of sugar. In 1911 and 1912 the rates will be respectively two-thirds and one-third of those just mentioned. The cost of growing cane may be set down at from 2s. 11d. to 3s. 5d. per ton of cane, according as black or white labour is employed, the lower figures representing the cost of black labour. About 10 per cent. of the sugar grown is cultivated by black labour. The following statement shows during the last four years the area cultivated and the sugar produced by white and black labour, respectively, and also the total amount of bounty paid each year:—

Year.	Area Cultivated by—			Sugar produced by—			Amount of Bounty.
	White Labour.	Black Labour.	Total.	White Labour.	Black Labour.	Total.	
	acres.	acres.	acres.	tons.	tons.	tons.	£
1902	21,591	2,466	24,057	19,434	1,526	20,960	36,333
1903	22,076	2,503	24,579	19,236	2,561	21,797	40,154
1904	19,114	2,411	21,525	17,812	1,838	19,650	36,197
1905	19,612	2,193	21,805	18,019	1,964	19,983	36,234

The figures in the above table are as returned by the Customs Department, and it will be seen that those for 1902 and 1903 differ as regards the area cultivated from those in the preceding table.

The following statement shows the variation in the Sydney wholesale price of two of the leading brands of sugar at various intervals since the 1st January, 1898:—

Date.	1A, per ton, duty paid.			No. 2 or IC, per ton, duty paid.		
	£	s.	d.	£	s.	d.
1898.						
*January 1	20	5	0	19	0	0
†July 1	19	5	0	18	0	0
†September 27	18	5	0	17	5	0
†November 2	18	5	0	16	15	0
1899.						
†August 1	18	5	0	17	0	0
†September 6	18	10	0	17	5	0
†November 16	18	10	0	17	10	0
1900.						
†January 1	18	10	0	17	10	0
†January 25	18	15	0	18	0	0
†March 22	19	0	0	18	10	0
†July 24	19	10	0	19	0	0
1901.						
‡October 9	21	10	0	21	0	0
November 8	21	0	0	20	10	0
1902.						
July 1	20	0	0	19	15	0
October 8	19	10	0	19	5	0
November 17	20	0	0	19	15	0
December 9	20	10	0	20	5	0
1903.						
February 7	20	15	0	20	10	0
October 22	20	5	0	20	0	0
1904.						
June 30	19	17	6	19	12	6
September 12	20	7	6	20	2	6
September 29	21	0	0	20	15	0
November 11	21	10	0	21	5	0
December 2	22	0	0	21	15	0
1905.						
January 6	23	0	0	22	15	0
January 26	24	0	0	23	15	0
May 23	23	0	0	22	15	0
July 13	22	0	0	21	15	0
November 2	21	10	0	21	5	0
1906.						
July 3	20	10	0	20	5	0

* Duty £4 per ton. † Duty £3 per ton. ‡ Imposition of Federal Tariff.

GRAPE VINES.

In almost every part of the State, with the exception of the subtropical portion and the higher parts of the mountain ranges, grape-vines thrive well, and bear large crops of succulent fruit, equal in size, appearance, and flavour to the most renowned products of France, the Rhinelands of Germany, and Spain. The principal vineyards are situated in the valleys of the Murray and Hunter Rivers, where neither pains nor money have been spared to introduce skilled labour, and to put up presses, vats, and other manufacturing appliances of the most approved kinds. Nevertheless, the vine-growing and wine-manufacturing industries are still in their infancy, though with a growing local demand, and with the opening up of a market in England, where the wines of New South Wales, in common with those of the other Australian States, have obtained some appreciation, the future of grape culture in this country appears to be fairly assured. At present, however, the production of New South Wales is comparatively insignificant, as will appear from the following table, which shows at intervals since 1860 the area under vines, the production of wine, and the average yield per acre:—

Year.	Total area under vines.	Area under vines for wine-making only.	Production.		Year.	Total area under vines.	Area under vines for wine-making only.	Production.	
			Total.	Average per acre.				Total.	Average per acre.
	acres.	acres.	galls.	galls.		acres.	acres.	galls.	galls.
1860	1,584	622	99,791	160	1899	8,278	4,602	739,668	160
1865	2,126	1,243	168,123	135	1900	8,441	4,534	891,190	197
1870	4,504	2,371	342,674	145	1901	8,606	4,889	868,479	178
1875	4,459	3,163	831,749	263	1902	8,790	5,041	806,140	160
1880	4,800	2,907	602,007	207	1903	8,940	5,101	1,086,820	213
1885	5,247	2,876	555,470	193	1904	8,840	5,298	928,160	175
1890	8,044	3,896	842,181	216	1905	8,754	5,279	831,700	157
1895	7,519	4,390	885,673	202					
1896	8,061	4,608	794,256	172					
1897	8,083	4,490	864,514	193	Average for 10 years ended 1895				203
1898	8,078	4,573	845,232	185	,, 10 ,, 1905				179

The above figures show that the wine industry has steadily, if slowly, increased during the period under review, the total area planted being now 8,754 acres, of which 5,279 acres yielded 831,700 gallons. The total number of vineyards in 1905 was 1,530. The average area of each vineyard was 5·7 acres, and the area planted with vines still in an unproductive state was 687 acres. Vignerons consider 250 gallons per acre a good yield; but the average yield for New South Wales reached this figure only in one year since the establishment of the industry, viz., in 1875, when it was recorded as 263 gallons. The average yield in 1905 was 157 gallons per acre, and during the last ten years 179 gallons. The best yield during the last twenty years was in 1891, when it was 237 gallons per acre.

Notwithstanding the winning of exhibition medals and expert approval, the export of the wines of the State has not yet reached an important figure. Among other causes which retard the acceptance of Australian wines by English markets may be mentioned the practice of shipping the product at too early an age, and the impossibility of obtaining from the shippers details respecting the vintage of any particular wine. Foreign experts also find fault with the method of casking; and there is no doubt that much of the success of New South Wales as a wine-exporting country will depend on the adoption of more advanced methods and the enterprise of the vignerons in properly advertising their productions, and bringing them sufficiently before the notice of the British public.

In the following table will be found particulars of the export trade in wine locally produced, for the six years extending from 1900 to 1905:—

Country to which exported.	1900.	1901.	1902.	1903.	1904.	1905
	gallons.	gallons.	gallons.	gallons.	gallons.	gallons.
Victoria	3,221	2,878	9,897	6,892	1,625	5,217
Queensland	4,395	6,540	11,071	16,454	12,874	11,144
Other Australian States	264	994	8,856	10,276	6,125	14,797
New Zealand	12,820	20,997	13,140	5,852	5,292	4,823
United Kingdom	2,177	2,811	43,307	3,982	6,711	1,505
South Sea Islands and Fiji	3,513	3,273	3,621	4,031	5,807	5,324
All Other Countries	1,934	2,158	5,907	5,706	4,418	4,661
Total	28,324	39,651	95,799	53,193	42,852	47,471

It will be seen from this that the export trade does not give very encouraging results. The largest quantity was formerly exported to New Zealand, but during the last three years Queensland has proved the State's best customer. There is great room for expansion in the trade with the United Kingdom, whose average annual import from all sources during the last five years amounted to 14,553,000 gallons. On the other hand, the removal of the Inter-state duties under Federation has stimulated the wine industry in the neighbouring States of South Australia and Victoria, but especially in South Australia. In 1900, the year before Federation, 4,386 gallons of wine were exported from South Australia to New South Wales, but in 1905 the figures had increased to 141,550 gallons.

The wine industry is hampered in its development by such drawbacks as phylloxera and anthracnose, or "black spot." Phylloxera has caused some damage in the Camden, Seven Hills, and Parramatta districts, and some alarm exists among wine-growers touching its development in the future. The afflicted areas are fortunately confined to isolated patches; but this is quite enough to cause the gravest apprehension.

The desire of the Government to extend the application of the most scientific methods in connection with wine-making and the general cultivation of the vine, and to successfully combat the phylloxera disease, has led to the appointment of an expert from one of the European Viticultural Colleges. Under his direction inspectors have been constantly engaged vigorously dealing with infected vineyards, while a Viticultural Station has been established at Howlong, near Albury, for the propagation of resistant stocks, and for the carrying out of various experiments in connection with wine-growing.

The culture of grapes is not restricted to the production of fruit for the purposes of wine manufacture only, for a considerable area is devoted to the cultivation of table-grapes, particularly in the neighbourhood of Sydney, and in Ryde, Parramatta, and other districts of Central Cumberland. The extent of country devoted to this branch of the industry in 1905 comprised 2,788 acres, with a production of 2,749 tons of grapes, giving an average of 1 ton of fruit per acre.

Although there is a large local demand, and a possibility of an export trade for raisin fruits, and although New South Wales is undoubtedly favourably situated for the prosecution of the industry, no extensive effort has so far been made in that direction. At the Wagga and Hawkesbury experimental vineyards, raisins and sultanas are dried every season and placed on the local market, where they are regarded as equal in every respect to the imported article.

ORCHARDS.

The cultivation of fruit does not attract anything like the attention it deserves, although the soil and climate of large areas throughout the State are well adapted to fruit-growing. With an unlimited area suitable for fruit-cultivation, and with climatic conditions so varied, ranging from comparative cold on the high lands to semi-tropical heat in the north coast district, a large variety of fruits could be and are cultivated. In the vicinity of Sydney, oranges, peaches, plums, and passion-fruit are most generally planted. On the tableland, apples, pears, apricots, and, in fact, all fruits from cool and temperate climates thrive well; in the west and south-west, figs, almonds, and raisin-grapes would grow; and in the north coast, pineapples, bananas, and other tropical fruits grow excellently.

The cultivation of the orange and the lemon has become one of the principal industries of the districts surrounding the metropolis. The first orange groves were planted near the town of Parramatta, and soon spread to the neighbouring districts of Ryde, Pennant Hills, Lane Cove, the whole of Central Cumberland, the valleys of the Hawkesbury and Nepean Rivers, and the slopes of the Kurrajong Mountains.

Statistics relating to this branch of fruit-culture are available only from the year 1878, and the state of the industry at intervals since that date is shown in the subjoined statement:—

Year.	Area under cultivation.			Production.	
	Productive.	Not yet bearing.	Total.	Total.	Average per acre.
	acres.	acres.	acres.	cases.	dozen.
1878	*	*	4,287	283,204	......
1880	*	*	5,939	317,159	......
1885	*	*	7,733	729,104	......
1890	8,737	2,551	11,288	770,800	1,058
1895	8,759	3,197	11,956	496,245	680
1896	8,359	4,131	12,490	487,158	699
1897	10,097	3,846	13,943	527,508	627
1898	10,487	3,902	14,389	653,268	747
1899	10,928	3,605	14,533	536,640	589
1900	11,013	3,952	14,965	540,523	589
1901	11,670	4,091	15,761	604,546	622
1902	12,550	3,657	16,207	424,366	406
1903	13,418	3,310	16,728	653,462	584
1904	14,486	2,918	17,404	659,865	547
1905	15,054	2,795	17,849	738,744	589

* Information not available.

In 1878 the area under oranges and lemons was 4,287 acres; in 1905 this had increased to 17,849 acres, of which 15,054 were productive. The production was 8,864,928 dozen, or 589 dozen per acre. During the last five years the seasons have been unfavourable, and the average yield for the period was 550 dozen, as against 647 dozen during the preceding five years. It is estimated that over 3,000 dozen of fruit to the acre can be obtained in an average season from fair-sized trees in full bearing, and it is, therefore, probable that the figures returned by the growers include the production of a considerable number of young trees. The number of orangeries cultivated during the year 1905 was 2,385, and of these, the average area was 7·5 acres.

The production of oranges has already attained such proportions that the growers are obliged to seek markets abroad for the disposal of their crop, as the demand, both in New South Wales and in the adjacent States, is in some seasons exceeded by the supply. The principal market outside Australia is in New Zealand. Efforts have been made to establish a trade with the United Kingdom, but for various reasons, they have not altogether met with success. However, in view of the success that has been attained in other countries in carrying these fruits long distances by sea, there is reason to hope that the present difficulties may be overcome.

The following table shows the area under orchards and fruit-gardens, exclusive of orangeries, together with the total value of each year's yield, for the period during which statistics relative to this cultivation have been collected:—

Year	Area of Productive Fruit-gardens and Orchards.	Area of Fruit-gardens and Orchards not bearing.	Total area cultivated for Fruit-gardens and Orchards.	Total value of the Production of Fruit-gardens and Orchards.	Approximate average value per acre.
	acres.	acres.	acres.	£	£ s. d.
1889	14,342	4,525	18,867	185,012	12 18 0
1890	16,081	6,274	22,355	213,934	13 6 0
1891	16,606	7,424	24,030	211,790	12 15 0
1892	18,117	8,163	26,280	229,425	12 13 0
1893	19,330	7,663	26,993	197,374	10 4 0
1894	21,465	8,258	29,723	175,473	8 3 0
1895	20,635	8,145	28,780	130,735	6 7 0
1896	24,031	8,524	32,555	159,715	6 13 0
1897	23,965	7,054	31,019	155,534	6 10 0
1898	24,564	7,174	31,738	158,678	6 9 0
1899	25,258	6,458	31,716	159,950	6 7 0
1900	25,766	5,503	31,269	270,081	10 10 0
1901	27,044	5,302	32,346	155,579	5 15 0
1902	27,161	4,216	31,377	173,535	6 8 0
1903	27,576	4,012	31,588	211,318	7 13 0
1904	26,196	3,740	29,936	162,670	6 4 0
1905	25,189	3,577	28,766	189,195	7 10 0

It will be seen that for some years past there has been but little increase in the area under orchards and fruit gardens. Since 1889 the increase has been 9,899 acres, but since 1896 there has been a decrease of 3,789 acres. About half the area under orchards is in the county of Cumberland, the actual acreage in 1905 being 11,511, and nearly two-thirds are situated in the coastal belt. During the first four years shown in the table the average production was valued at from £12 to £13 per acre, but during the last five years the average has been ony £6 14s. per acre.

The fruit-production of New South Wales, with the exception of oranges, is still far behind the demands of local consumption. The State is, therefore, obliged to import large quantities, the greater portion of which could be successfully grown within its own boundaries. Leaving out of the question the considerable importations of tropical fruits from

Fiji, the South Sea Islands, and Queensland, the introduction of fruit from abroad is still greatly in excess of the moderately-estimated possibilities of local production.

The following statement shows the imports of fresh fruits during each of the last three years, and the exports of locally-grown fruit. The exports are almost entirely to the other States and New Zealand, and the imports chiefly from Italy and the United States, Victoria, and Tasmania :—

Fresh Fruits.	Imports.			Exports (Domestic Produce).		
	1903.	1904.	1905.	1903.	1904.	1905.
	centals.	centals.	centals.	centals.	centals.	centals.
Apples	175,722	174,340	228,966	16,384	15,960	30,096
Oranges and Lemons	17,266	25,719	23,133	172,711	112,441	156,808
Other	318,126	98,294	166,732	108,220	83,880	93,604
Pulped	33,063	23,664	307,429	4,234	2,111	249

In addition to the above there were large imports of jams and canned fruits. In 1905 the value of the net import of fruit commodities, jams, fresh fruits, preserved fruits, &c., was £333,959, a sum which is far too large, considering the State's natural advantages of both soil and climate.

MARKET-GARDENS.

In 1905 there were in the State 2,842 holdings, comprising 9,119 acres, cultivated as market-gardens, the average size of each garden being 3·2 acres. The value of the production for the year was set down at £242,405. About half the area laid down to market-gardens is in the county of Cumberland. Until comparatively recent years, market-gardening was almost entirely in the hands of the Chinese, but during the last five years it has received a good deal of attention from European farmers in the districts in the vicinity of the metropolis.

The subjoined statement gives the number, area, and value of production of market-gardens in various years since 1890 :—

Year.	Market-gardens.	Area.	Value of Production.	
			Total.	Average per acre.
	No.	acres.	£	£ s. d.
1890	*	5,098	192,597	37 15 7
1895	2,297	6,899	170,115	24 13 2
1900	2,266	7,764	189,448	24 8 0
1901	2,215	7,834	208,040	26 11 1
1902	2,283	8,263	218,612	26 9 1
1903	2,559	8,754	213,412	24 7 7
1904	2,783	8,827	225,400	25 10 8
1905	2,842	9,119	242,405	26 11 8

* Not available.

One branch of gardening—tomato-culture—has not yet received that attention which its importance warrants. As the cultivation only entails light labour, and is particularly remunerative, the vegetable could be grown by persons unaccustomed to heavier labour on farms, and it is somewhat surprising that the industry should be so long neglected. In 1905 there were 439 acres under cultivation for tomatoes, which yielded 63,467 cases, or 145 cases per acre.

MINOR CROPS.

In addition to the crops already specified, there are small areas under various kinds of products—as, for instance, pulse and gourd crops—which do not call for any particular mention.

Pulse.—During the year 1905 there were 142 acres under crop to peas and beans, which gave a total yield of 1,911 bushels.

The peas and beans herein described were grown mainly as hard fodder for horses and pigs, and must not be confounded with the peas and beans cultivated in the kitchen and market gardens for table use as vegetables.

In addition to the green peas grown in market-gardens, which are included in market-garden produce, 798 acres were cropped on farms, giving a total yield of 36,196 bushels.

Gourd Crops.—The area devoted to pumpkins and melons during the year 1905 was 5,691 acres, and the yield 19,792 tons. The principal places of cultivation are the maize districts and the metropolitan county.

Pumpkins are grown principally for table use as vegetables, and melons for jam-making; but they are also used extensively as fodder for cattle and pigs. The number of acres under gourd-vines mentioned above is somewhat below the truth, as crops of pumpkins and melons are sometimes raised in orchards and vineyards between the rows of fruit-trees and vines, and particulars respecting the production are not returned.

Other branches of agriculture have hardly been considered, although, no doubt, as the rural population increases, their importance will be more recognised, and even now there are indications that more attention is being paid to them. Little has been attempted in the cultivation of any of the following, although experiment has proved that they can all be raised in the State, namely, olives, castor-oil plant, flax, ramie fibre, hops, silk, coffee, and cotton. The potentialities of the soil and climate of New South Wales are so great that almost any kind of produce can be raised, and there is every reason for hope for the future.

The olive has been successfully grown in South Australia, and could be cultivated in districts with suitable temperature in New South Wales.

The castor-oil plant grows luxuriantly in the humid coastal districts.

One of the most valuable of crops is flax, and it is a matter of surprise that more persistent efforts have not been made to acclimatise it in New South Wales. In one form or another flax was imported into New South Wales in 1905 to the value of £148,094.

Hops are but little cultivated in New South Wales, although a few very small crops are picked in the neighbourhood of Orange. Other districts adapted for its cultivation are Armidale, Goulburn, and Cooma.

IRRIGATION.

Although there is an immense area of the State which possesses the requisite rainfall and the quality of soil necessary for the successful growing of crops, the area suitable for cultivation could be greatly increased under proper schemes of water conservation and irrigation. These questions have long attracted considerable attention; nevertheless, despite the fact that much valuable information has been obtained regarding the supply of water, the storage capacity of basins adjacent to irrigable areas, and the irrigable areas themselves, no works of any magnitude have yet been attempted. Hitherto operations have been chiefly confined to tapping the artesian supply for the purpose of obtaining water for domestic use and for stock, but schemes of a much more ambitious nature are now on foot to conserve the waters of the inland rivers.

The most important of these is the proposed erection of a dam at Barren Jack, 3 miles below the confluence of the Murrumbidgee and

Goodradigbee Rivers, a site which affords exceptional facilities for storing the flood waters of the Murrumbidgee, the catchment area being 5,000 square miles. The dam, as proposed, will retain a maximum depth of 120 feet of water, and the quantity of water impounded will be 7,000,000,000 cubic feet, or sufficient to cover 159,800 acres to a depth of 1 foot. The estimated cost is £451,800, including land resumptions, &c., and the height will be eventually increased sufficiently to retain a depth of 200 feet of water, at an additional cost of £316,000. The distributing channels are estimated to cost £521,000, and will command an area of 358,000 acres, the greater portion of which—196,000 acres—is first-class land.

The Lachlan River is another stream which offers great facilities for the conservation of water, and investigations carried out by the Principal Engineer for Water Supply show that an excellent site for a storage basin exists at Wyangala—a short distance below the junction of the Lachlan and Abercrombie Rivers. The catchment area is 3,200 square miles, and a dam 155 feet high would impound 12,000,000,000 cubic feet of water.

On many station properties artesian bores have been laid down, and private efforts have also been made to utilise the waters of the inland rivers for the purposes of irrigation. The most extensive private scheme is at North Yanko, where there are about 60 miles of channels, supplied from Cudgell Creek, an anabranch of the Murrumbidgee. These channels have served to irrigate 750 acres of lucerne and 250 acres of sorghum, and the latter have sufficed to feed 15,000 sheep for a period of three months during the dry season.

The Water Rights Act, which has been in force since the 1st November, 1896, and which is administered by the Public Works Department, has proved to be even more useful than was anticipated. Prior to its operation, dams and other works on rivers and creeks existed on sufferance only; but now all rivers, creeks, and lakes are vested in the Minister for Works, who is empowered to grant licenses for works after making due inquiry.

The proposed works are chiefly dams for conserving water or pumping machinery for irrigation, but in a few cases the applications are in connection with dams and channels for irrigation without the aid of pumping. In consequence of the system of licensing works after a public inquiry, the Water Rights Act has had the intended effect of putting an end to the cutting of dams and the destruction of works for water conservation and supply by persons who imagined these works were a source of grievance. As a natural consequence, it has also had the effect of encouraging the construction of dams and other works of a higher class than the landowners were formerly willing to undertake.

Under section 4 of the Water Rights Act the Government has the power to construct any work for water conservation or drainage, if, after the publication of an estimate of the cost in the *Gazette*, the landowners concerned submit a petition in favour of the work, and intimate their willingness to contribute to its cost. The rates to be paid in such cases are fixed by the Local Land Board.

GOVERNMENT EXPERIMENTAL FARMS.

For the purpose of disseminating agricultural knowledge, colleges and experimental farms have been established by the Government, and lecturers are sent to agricultural centres. Attached to the Hawkesbury Agricultural College is an area of 3,546 acres, of which 1,166 were under cultivation during 1905. Accommodation is provided for resident students, the number enrolled in 1905 being 201. Theoretical as well as practical instruction is imparted by experts in every branch of agriculture; and experimental work is carried on with cereal and other crops, fertilisers are tested, analyses of soils are made, and the arts of dishorning and speying cattle, with other veterinary surgical practices, are taught. Opportunities are afforded for practice in general dairy-farming work, and instruction is imparted in cheese-making, in the management and breeding of poultry, in the rearing of bees and the preparation of honey for the market, in the killing and dressing of sheep, in the carpenter's and the blacksmith's trades, in the construction of fences, and in various other mechanical trades.

Experimental farms have been established in various districts in the State, the instruction and experiments being adapted to the climatic conditions. These farms are situated at Wagga, Wollongbar, Bathurst, Berry, Grafton, Coolabah, Cowra, Glen Innes, Pera Bore, and Moree. At the four first mentioned, accommodation is provided for students, who receive instruction in the practical farming work suited to the respective districts. The fees are small, amounting, as a rule, to about £25 per annum, which sum covers tuition and board, while at the Hawkesbury College and the farms several bursaries are awarded to specially deserving students.

At the Wagga farm a specialty is made of growing seed wheats and fruits for drying, and of breeding dairying-stock and swine. The total area is 3,300 acres, and the area under cultivation 818 acres.

At Wollongbar, between Lismore and Ballina, experiments on a large scale with grasses for the grazing of dairy cattle have been carried on, and steps taken to assist the dairying industry, which is greatly on the increase in the district.

The objects to which the Bathurst Experimental Farm is devoted are the cross-breeding of sheep, irrigation, fruit-growing, cereal culture, and general mixed farming. The area of the farm is 695 acres, and the area under crops 403 acres.

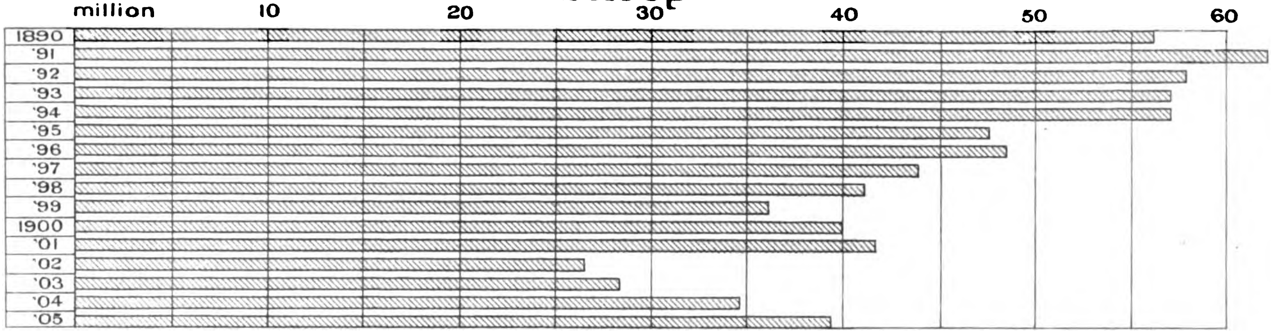
The total area of the Coolabah farm, which was established for experiments in the dry districts, is 15,000 acres, but only 2,200 acres are enclosed. The Moree Irrigation Farm has an area of 79 acres, the Berry Stud Farm of 323 acres, and the Viticultural Nursery at Howlong of 250 acres.

STATE ADVANCES TO SETTLERS.

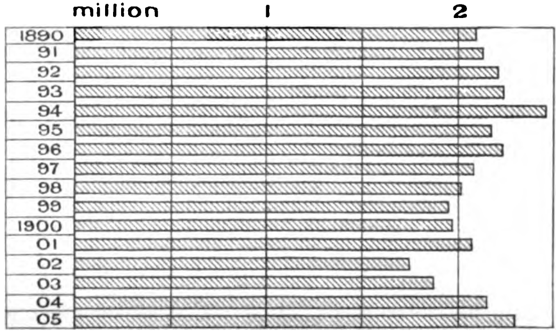
Advances of money to farmers in New South Wales are made by the State, the system being similar to that of the French *Crédit Foncier*. Act No. 1, of 1899, was passed to assist settlers who were in necessitous circumstances, or who were financially embarrassed owing to the droughts. Under this Act a Board was appointed to consider applications for relief, and determine whether such relief should be granted. No advance to any settler was to exceed £200, to be repaid in ten years at 4 per cent. per annum. An Amending Act (No. 1 of 1902) was passed, giving to the Board power to advance up to £500, and providing that the advances, with interest thereon, should be repaid within thirty-one years. Up to the 30th June, 1906, 11,188 applications had been received for advances; the amount applied for being £1,718,431. Of these applications, 4,927 have been refused or withdrawn, or granted and the loan refused by applicant. The number of applications approved and loans accepted is 6,178, representing advances to the amount of £647,624. Each loan, therefore, averages nearly £105. Repayments of principal amount to £236,415, in addition to which £68,646 has been received in interest.

LIVE STOCK

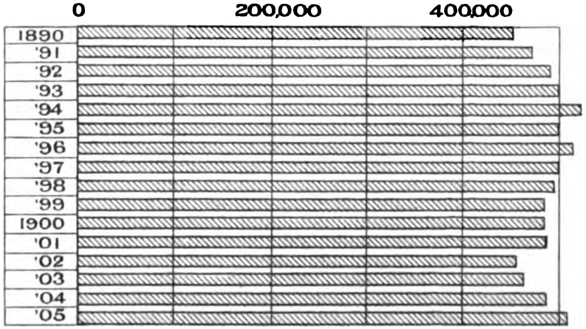
Sheep



Cattle



Horses



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PASTORAL INDUSTRY.

The position attained by New South Wales has, in a great measure, been due to the fitness of its soil, vegetation, and climate for the successful rearing of the principal species of stock which supply the wants of civilised man, and so largely contribute to the wealth of nations.

The beginnings of pastoral enterprise were very humble. The whole stock of the community which accompanied Captain Phillip comprised only 1 bull, 4 cows, 1 calf, 1 stallion, 3 mares, 3 foals, 29 sheep, 12 pigs, and a few goats; and although the flocks and herds of Australasia have not sprung from these animals alone, it will be seen on how small a scale the business of stock-raising was first attempted. No systematic record of the arrival of live stock seems to have been kept in the early days of settlement; but it appears that in the period between Governor Phillip's landing and the year 1800 there were some slight importations, chiefly of sheep from India. From the information available, it would appear that the numbers of each class of stock at various years up to 1850, prior to the separation of Victoria, were as follow :—

Year.	Horses.	Cattle.	Sheep.	Swine.
1778	7	6	29	12
1792	11	23	105	43
1796	57	227	1,531	1,869
1800	203	1,044	6,124	4,017
1825	6,142	134,519	237,622	39,006
1842	56,585	897,219	4,804,946	46,086
1850	132,437	1,738,965	13,059,324	61,631

In 1851 the severance of Victoria, then the fairest province of the mother colony, reduced the number of stock considerably, and the separation of Queensland at the close of 1859 involved a further loss, for at the end of that year the numbers of each kind of live stock within the existing boundaries of New South Wales were 6,119,163 sheep, 2,408,586 cattle, 251,497 horses, and 180,662 pigs. The following table shows the number of stock at the end of each decennial period from 1861 to 1901 inclusive, and annually thereafter :—

Year.	Horses.	Cattle.	Sheep.	Swine.
1861	233,220	2,271,923	5,615,054	146,091
1871	304,100	2,014,888	16,278,697	213,193
1881	398,577	2,597,348	36,591,946	213,916
1891	469,647	2,128,838	61,831,416	253,189
1901	486,716	2,047,454	41,857,099	265,730
1902	450,125	1,741,226	26,649,424	198,097
1903	458,014	1,880,578	28,656,501	221,592
1904	482,663	2,149,129	34,526,894	330,666
1905	506,884	2,337,973	39,506,764	310,702

It will be seen that since 1891 the sheep have diminished in number to the extent of over 22,000,000; but the other classes of stock show increases as follow:—Horses, 37,000; cattle, 209,000; and swine, 57,000. In order to indicate the districts in which the changes in the flocks and herds have taken place, the following table has been prepared, showing the number of live stock in each district at the end of various years since 1896. The returns for years prior to 1896 were compiled on a different basis, so that it is impossible to make any comparison with them; but the figures given will be sufficient to show that the chief decrease in sheep has been in the Western districts, where the ravages of drought are soonest and most keenly felt. A striking feature of the table is the large increase both of dairy and ordinary cattle in the coastal district:—

District.	1896.	1901.	1903.	1904.	1905.
SHEEP—					
Coastal District	964,759	1,097,471	865,447	1,037,011	1,180,031
Table-lands	7,036,733	8,859,069	6,950,075	7,783,680	8,408,284
Western Slope	10,968,344	11,671,524	7,684,484	9,231,550	10,618,286
Western Plains and Riverina	18,541,961	14,578,523	9,045,333	11,350,302	13,513,121
Western Division	10,806,993	5,522,953	8,980,117	5,124,351	5,787,042
Unclassified	......	127,559	181,045	......	......
Total	48,318,790	41,857,099	28,656,501	34,526,894	39,506,764
ORDINARY CATTLE—					
Coastal District	612,797	667,282	678,211	774,839	814,832
Table-lands	541,493	500,974	417,217	451,748	481,662
Western Slope	403,294	305,789	247,808	290,524	342,135
Western Plains and Riverina	199,817	114,327	132,690	150,508	185,654
Western Division	68,579	41,247	42,223	56,574	70,740
Total	1,825,980	1,629,619	1,518,149	1,724,193	1,895,023
DAIRY COWS IN MILK—					
Coastal District	238,530	284,099	276,133	311,955	323,848
Table-lands	82,487	70,224	48,998	62,711	62,460
Western Slope	46,578	39,732	23,791	33,189	38,367
Western Plains and Riverina	26,372	19,790	11,766	15,199	16,508
Western Division	6,216	3,990	1,741	1,882	2,267
Total	400,183	417,835	362,429	424,936	442,950
HORSES—					
Coastal District	160,285	160,704	158,128	164,333	169,824
Table-lands	115,314	112,294	103,645	106,211	108,262
Western Slope	108,493	110,845	103,869	111,638	119,321
Western Plains and Riverina	85,622	77,650	70,082	77,302	84,782
Western Division	40,922	25,223	22,790	23,179	24,745
Total	510,636	486,716	458,014	482,663	506,884

SHEEP.

The suitableness of the land for pastoral pursuits was undoubtedly the means of leading the infant colony of New South Wales to take its first step on the path of commercial progress; and it is interesting to trace the progress of the pastoral industry in its earliest stages and observe how steadily some of the settlers persevered, in the face of the almost insuperable difficulty of transport which existed a century ago.

By the year 1795 Captain Macarthur, one of the first promoters of sheep-breeding in New South Wales, had accumulated a flock of 1,000; but, not satisfied with the natural increase of his flocks alone, he sought also to improve the quality of their fleeces. A happy circumstance enabled him to attain his object, for in 1797 Captain Waterhouse arrived from the Cape of Good Hope with a number of very fine Spanish-bred sheep, which he sold to various stockowners. With the exception of Macarthur, however, those who secured sheep of the superior breed made no attempt to follow up their advantage, but, by scientifically crossing his new stock with the old, he gradually improved his strain, and in a few years obtained fleeces of very fine texture.

Prior to the present century, the production of the finest wool had been confined chiefly to Spain, so that woollen manufactures were necessarily somewhat restricted, and it was at this favourable period that Macarthur arrived in England with specimens of the wool obtained from his finest sheep, conclusively proving the capabilities of Australia as a wool-producing country. In this way he opened up with English manufacturers a small trade, which, as Australasian wool rose in public estimation, gradually increased until it reached its present enormous dimensions.

Although it would appear from the historical records of the State that Macarthur was not the first to introduce merino sheep into Australia, yet there is no doubt that to him is due the credit of having been the first to prove that the production of fine wool could be made a profitable industry in this State.

As might have been anticipated, natural conditions in Australia have, in some respects, changed the character of the Spanish fleece. The wool has become softer and more elastic, and while diminishing in density it has gained in length, so that the weight of the fleece has increased. The quality of the wool, on the whole, has improved under the influence of the climate, and Australian wool is now probably the best in the world.

The following table, showing the number of sheep at the close of each year since the separation of Queensland, illustrates the progress of sheep-breeding in New South Wales:—

Year.	Sheep.	Year.	Sheep.	Year.	Sheep.
1860	6,119,163	1876	25,269,755	1891	61,831,416
1861	5,615,054	1877	21,521,662	1892	58,080,114
1862	6,145,651	1878	25,479,484	1893	56,980,688
1863	7,790,969	1879	30,062,910	1894	56,977,270
1864	8,271,520	1880	35,398,121	1895	47,617,687
1865	8,132,511	1881	36,591,946	1896	48,318,790
1866	11,562,155	1882	36,114,814	1897	43,952,897
1867	13,909,574	1883	37,915,510	1898	41,241,004
1868	15,080,625	1884	31,660,321	1899	36,213,514
1869	14,989,923	1885	37,820,906	1900	40,020,506
1870	16,308,585	1886	39,169,304	1901	41,857,099
1871	16,278,697	1887	46,965,152	1902	26,649,424
1872	17,566,048	1888	46,503,469	1903	28,656,501
1873	18,990,595	1889	50,106,768	1904	34,526,894
1874	22,797,416	1890	55,986,431	1905	39,506,764
1875	25,353,924				

The ratio of annual increase for the whole period is 4·2 per cent. Divided into five periods the ratios are—

1860–70 annual increase 10·3 per cent.
1870–80 „ „ 8·1 „
1880–90 „ „ 4·7 „
1890–1900 „ decrease 3·4 „
1900–1905 „ „ 0·3 „

Considering the unimproved condition of the pasturage over a great portion of New South Wales, it was apparent in 1891 that the State was overstocked, and graziers restricted the natural increase of their flocks by breeding only from the better-class ewes. In addition, the following season proved unfavourable, so that the end of the year saw a large decrease in the number of sheep depastured. The unfavourable season of 1892 was, unfortunately, only the forerunner of many others, for, with the single exception of 1900, the whole of the years up to 1902 were distinctly unfavourable to the pastoral industry. The climax was reached in the last mentioned year, which was particularly disastrous, as the number of sheep fell from 41,857,099 at the beginning of the year to 26,649,424 at its close, when the total flocks were over 35 millions less than in 1891.

The decrease in the total was accompanied by great changes in the numbers of individual flocks, and these changes may be traced in the following table, giving an approximate classification of the flocks, for various years from 1891 to 1905. In the former year there were only 13,187 holdings, but in 1905 the number had increased to 18,949, although the sheep depastured had decreased by over 22 millions. It is significant to note that while in 1891 there were 73 holdings which each carried over 100,000 sheep, the number in 1901 was 12, and in 1905 only 7. The sheep in flocks of over 20,000 comprised 62 per cent. of the total in 1891, but only 37 per cent. in 1905. The greatest change has occurred since 1894, when a very large number of sheep perished, and it is evident that pastoralists realised that the best method of combating droughty seasons lay in the subdivision of their large flocks :—

Year.	Size of Flocks.								
	1 to 1,000.	1,001 to 2,000.	2,001 to 5,000.	5,001 to 10,000.	10,001 to 20,000.	20,001 to 50,000	50,001 to 100,000.	100,001, and over.	*Total.
	Number of Sheep.								
1891	2,794,751	2,979,168	5,493,942	4,943,221	7,056,580	15,553,774	12,617,296	10,392,774	61,831,416
1894	2,863,963	3,050,107	5,264,700	5,114,109	6,844,167	15,125,070	10,366,501	8,348,653	56,977,270
1897	3,169,977	2,710,546	4,511,676	4,625,398	6,230,663	12,468,278	6,972,298	3,264,061	43,952,897
1900	3,471,775	3,266,864	4,725,271	4,824,604	6,206,402	10,686,291	4,564,309	2,066,475	40,020,506
1901	3,797,114	3,560,849	5,519,008	5,210,117	6,666,429	10,562,373	4,835,547	1,588,103	41,857,099
1902	3,988,724	2,580,865	3,867,402	3,862,638	5,329,031	5,039,100	1,297,333	684,331	26,649,424
1903	3,580,943	2,649,465	3,956,302	3,770,657	5,201,133	7,120,878	1,489,895	706,688	28,656,501
1904	3,808,700	3,158,219	4,722,130	4,307,558	6,004,591	8,750,595	3,096,192	678,909	34,526,894
1905	4,066,162	3,787,648	5,746,793	4,580,497	6,522,915	10,001,922	3,769,940	1,031,587	39,506,764

* Includes sheep in unclassified flocks, 208,515 in 1900 ; 127,559 in 1901 ; and 181,045 in 1903.

Year.	1 to 1,000.	1,001 to 2,000.	2,001 to 5,000.	5,001 to 10,000.	10,001 to 20,000.	20,001 to 50,000	50,001 to 100,000.	100,001, and over.	Total.
	Number of Holdings.								
1891	7,606	1,954	1,696	686	495	491	186	73	13,187
1894	8,402	2,013	1,633	716	441	478	148	60	13,891
1897	9,376	1,767	1,383	651	436	406	104	21	14,144
1900	10,646	2,152	1,462	676	431	349	67	14	15,797
1901	11,800	2,351	1,722	729	465	344	76	12	17,499
1902	14,074	1,715	1,186	534	371	168	20	6	18,074
1903	13,154	1,791	1,253	528	368	238	23	6	17,361
1904	12,732	2,146	1,498	601	429	296	48	5	17,755
1905	13,069	2,560	1,816	638	464	338	57	7	18,949

While considering the great losses caused by drought during the period 1891 to 1902, it may not be out of place to direct attention to the rapid manner in which the flocks of the State increase under favourable conditions.

After allowing for the causes which naturally impede the increase, such as the demands of the slaughter-yard, the requirements of the neighbouring States, and the losses occurring from other causes than drought, it will be found that the rate of annual increase has been as high as 20 per cent., so that it is possible for the flocks of New South Wales to increase two-fold in about four years. Actual experience shows that such rate of increase occurred in 1904 and in several of the earlier years. During the period of five years from 1861 to 1866 there was a two-fold increase; and the flocks of the State were again doubled in the eight years from 1866 to 1874, and in the thirteen years from 1874 to 1887. How many sheep could be sustained under a system of artificial feeding and watering may hereafter become a question of national interest; but it is abundantly plain that it would be impossible under the present mode of depasturing stock for the State to support for any number of years an increase of sheep similar to that experienced during the last two years. The stock-carrying capabilities of New South Wales are, however, very difficult to estimate, as the greater portion of the country is yet in its natural state. Improvements such as the subdivision of pasturage, a better system of water conservation and irrigation, an intelligent extension of the growth of saltbush, cottonbush, and other drought-resisting shrubs and natural grasses, and the cultivation of artificial fodder, are gradually being effected, and will indefinitely extend the capacity for supporting stock of all descriptions.

The export and import of sheep during the last ten years is shown below. The figures cannot be considered as of much value, being somewhat in excess of the truth, since sheep are often transferred from one State to another for the convenience of station-holders, or for better pasturage, as well as for purposes of trade:—

Year.	Exported.	Imported.	Year.	Exported.	Imported.
	No.	No.		No.	No.
1896	744,578	1,010,176	1901	1,237,875	413,409
1897	1,022,295	1,171,794	1902	1,700,164	360,306
1898	1,311,880	700,718	1903	761,546	1,521,278
1899	1,200,331	498,111	1904	883,156	662,691
1900	754,849	656,699	1905	1,619,842	798,026

The demand for sheep for local consumption was until recent years so small compared with the supply that it did not appreciably affect the increase of the flocks of the State. This, however, is not now the case; the annual demand for food consumption within the State is about 7 per cent. of the number of sheep depastured—equal to about three-fifths of the cast. By "cast" is meant the number at such age when it would be more profitable to send them for slaughter than to keep them, in the case of ewes for breeding, or for further growth in the case of non-breeders. The cast, expressed as a percentage of the whole of the sheep depastured, is a variable quantity, which, however, may be taken as about 11½ per cent. The number slaughtered for export in a frozen or preserved state, and for tallow, brings up the total slaughtered to nearly 8 per cent. of the entire flocks.

The following table gives the number of sheep in each State of the Commonwealth and in New Zealand at the end of 1905, together with the proportion of the total owned in each province:—

State.	Sheep.	Proportion owned in each State.
	No.	per cent.
New South Wales	39,506,764	42·24
Victoria	11,455,115	12·25
Queensland	12,535,231	13·40
South Australia	6,202,330	6·63
Western Australia	3,120,703	3·34
Tasmania	1,583,561	1·69
Commonwealth	74,403,704	79·55
New Zealand	19,130,875	20·45
Australasia	93,534,579	100·00

It will be seen that New South Wales stands first in Australasia as a sheep-breeding country, though Victoria is the most closely-stocked province.

The different degrees of success attending sheep-farming in various parts of the country have long since directed attention to the fact that every part of Australia is not equally fitted for the production of fine wools. New South Wales may be divided climatically into four zones:—(1) The coast country extending from the seaboard to the main range, the breadth of which varies from comparatively nothing up to 100 miles; (2) the table-land districts on the summit of the range; (3) the upper part of the western slopes; and (4) the interior, or "saltbush country."

The climate of the eastern seaboard for a considerable distance inland is too moist, and a large portion of the country too poor, for the adequate sustenance of merinos, but it is probable that the coarser breeds of sheep would not deteriorate through the limited food supply and the rugged nature of the country. On crossing the coast range, however, the grazing and wool-growing capabilities are at once apparent, and further to the westward the conditions are still more favourable. In the abundant pastures of the Riverine districts the wool is less fine than in the country immediately west of the table-lands, but the fleeces are generally sound and heavy. Further in the saltbush country the wool suffers both in weight of the fleece and in its quality; but the country is fattening, and the stock are generally more healthy than those nearer the sea. In the country on the other side of the Darling the great summer heat is adverse to the production of heavy fleeces; but even there a fair class of wool is produced, as the stockowners are constantly introducing fresh blood, and so counteracting the tendency towards the degeneration of the breed which otherwise might ensue.

The introduction of sheep and cattle into New South Wales was forbidden for many years, owing entirely to the fear that the flocks and herds might be contaminated by scab and other diseases prevalent in European flocks; but these restrictions were removed at the beginning of the year 1888, and pure-bred sheeep are now imported from the United Kingdom, the United States, and Germany. So far, the breed imported has been chiefly the merino; but Lincoln, South Down, Vermont, Shropshire, and other well-known breeds have been introduced. It is, however, to Tasmania that pastoralists chiefly look for their stud stock, several breeders in that State having made a speciality of raising merinos from the finest strains procurable in the world. The stud stock bred in the island State possess generally a fleece of strong character—an essential feature for the maintenance of weight and quality in those districts of New South Wales where the natural tendency is towards extreme fineness. The sheep imported from Tasmania in 1904 numbered 5,266, with a value of £30,569, while in 1905 the number was 4,923, and the value £39,274. In addition to the stud sheep from Tasmania, 8 rams and 14 ewes were imported from England.

It is now generally admitted that, so far as the fleece is concerned, the Australian merino has little to gain by any further admixture of European or American blood; but it is equally admitted that there is room for improvement in the physique of the animal. To produce a larger carcase, without interfering with the quality of the fleece, many experiments have been made, but without much success, and it has been found that the crossing of noted breeds of English rams with Australian ewes has invariably resulted, after a generation or two, in a deterioration of the merino. The breeding of sheep for consumption, and for the sake of the wool, have, therefore, developed naturally into two distinct fields of industry. It may here be mentioned that the carcase of the ordinary

Australian merino, when dressed, averages about 46½ lb., whereas dressed carcases of the Lincoln or Leicester breed average 57 to 60 lb. The food qualities of the merino are not appreciated in the London market, with the result that the improved prospects of export have induced growers to introduce large sheep for cross-breeding, in order to secure a heavier and more presentable carcase. It remains to be seen, however, how far the pasture and climate of the country hitherto devoted to the merino are suitable to the more gross-feeding cross-breed. In most cases it is found that the best results from the long-woolled breeds and their crosses with the merino are obtained when the flocks can be worked as part of the rotation of a mixed farm. The various breeds of sheep in New South Wales are the Merino, Lincoln, Leicester, Downs, and Romney Marsh, and crosses of the long-woolled breeds, principally with the merino. In addition, the Suffolk Downs sheep, which appear to be pre-eminently adapted for farming purposes and the production of a weighty lamb for the export trade, were introduced into the New England district during 1904. At the close of 1905, the respective numbers of merino and long-woolled sheep and cross-breeds were as shown below, the figures including only those in flocks of 100 and over :—

Class of Sheep.	Rams.	Ewes.	Wethers.	Lambs.	Total.
Merino (combing)...	402,033	13,318,789	6,449,240	6,157,433	26,327,495
,, (clothing)...	126,075	4,406,172	2,309,210	2,281,944	9,123,401
Coarse-woolled	64,906	1,492,293	1,043,965	718,291	3,319,455
Total	593,014	19,217,254	9,802,415	9,157,668	38,770,351

Of the coarse-woolled sheep the largest proportion are Lincolns and their crosses with merino. During the last fourteen years the proportion of English and cross-bred sheep has increased considerably. Twenty-one years ago the proportion of long-woolled and cross-breds was only 3½ per cent., and for fully ten years after it stood at about 2½ per cent. In 1893 the proportion rose to 4·3 per cent., and with the development of the meat export trade it has now advanced to over 8 per cent.

The climate of New South Wales admits of stock of all kinds being left in the open air, and there is no necessity for housing them during the winter months, except on the highlands. The sheep are either kept in paddocks or under the care of shepherds, though on some stations they are both shepherded and paddocked.

The advantages of the paddocking system are numerous, and are now fully recognised by stockowners. Sheep kept in paddocks thrive well, and are less liable to foot-rot and other diseases; they grow a better fleece and the wool is sounder and cleaner; the sheep increase in size and live longer; in addition, the expenses of the station are less than if worked under any other system.

It has also been found that the percentage of lambing is higher among sheep which are paddocked. The percentage of lambs obtained from the ewes in Australia is, however, far lower than that experienced in the United Kingdom, where the ratio on account of twin lambs has been known to exceed 160 per cent., and over a series of years, amongst the Suffolk flocks, considerably exceeds 130 per cent. This result is doubtless due to the much greater care and attention bestowed on English sheep at the lambing season. During the year 1905, 15,291,316 ewes lambed, and the lambs marked numbered 11,303,163. The total increase of sheep in the State was 4,979,870, the details of which are summarised below:—

Sheep on 31st December, 1904		34,526,894
Lambs marked during 1905		11,303,163
Sheep imported during 1905		798,026
		46,628,083
Slaughtered for food for local consumption (excluding sheep killed on stations and farms)	1,383,855	
Slaughtered for food on stations, &c.	905,579	
,, for meat preserving	356,694	
,, for freezing for export	1,306,160	
,, for boiling-down	7,589	
Lambs slaughtered for food for local consumption	324,054	
Total slaughtered, 1905	4,283,631	
Exported during 1905	1,619,842	
Loss by ordinary mortality, drought, dogs, and missing sheep	1,217,846	
Total deduction		7,121,319
Sheep on 31st December, 1905		39,506,764
Increase on previous year		4,979,870

The relative advantages and profitableness of sheep-rearing and wheat-farming have been the subject of much discussion. The question is one which hardly comes within the scope of a work such as this, but a few general remarks on the subject may not be out of place. The climate and soil are, of course, the chief considerations in determining the uses to which land should be put; but while it is true that many districts unfit for cultivation are suitable for grazing, it may be said that the more suitable a district is for cultivation the greater are its capabilities for pastoral purposes, and in such circumstances the best results can be secured by the combination of both pursuits. Where wheat is grown, the fields are fertilised and kept free from noxious vegetation by sheep, the animals are better fed than is otherwise the case, and the risk of heavy stocking is reduced by utilising the cultivated land. Sheep grazed on cultivated lands are remarkably healthy, and there is no better means of keeping them free from disease; fluke and worms are almost unknown, and there is considerably less foot-rot found amongst them. To what extent the stock-carrying capacity of the land is improved by cultivation it is difficult to say, but on good average land it may be put down at 25 per cent. On the whole, it may safely be said that with one-third or one-fourth of its area broken up, land will carry as many sheep on the portion not broken up as the whole area would carry in its natural state, and without taking into consideration the value of the crops harvested, the return derived from grazing alone would be larger than if sheep-rearing were followed by itself. For many years experiments with lucerne as an adjunct to the natural herbage have been successfully carried on, and in fairly rich soil with good drainage its cultivation is greatly extending. In some of the largest stations in the State there are now thousands of acres laid down to this excellent fodder. At Forbes 22 acres of irrigated lucerne maintained 1,600 sheep in good condition during four months prior to the breaking-up of the drought.

WOOL.

The wool-clip of New South Wales is its most important item of production, and it may be said that the prosperity of the State in a large measure depends upon the wool market. The following table summarises the export trade in New South Wales wool during the period 1860-1905, and illustrates the growth of this important industry during the forty-five years. The weights given represent the actual exports, washed and greasy wool being taken together :—

Year.	Quantity.	Total Value.	Year.	Quantity.	Total Value.
	lb.	£		lb.	£
1860	14,962,362	1,454,289	1883	188,161,710	9,598,761
1861	18,171,209	1,768,978	1884	173,986,303	8,953,100
1862	20,988,393	1,801,186	1885	168,151,659	7,246,642
1863	15,842,520	1,316,520	1886	173,985,640	7,028,596
1864	25,827,917	2,294,615	1887	216,450,342	8,911,155
1865	29,858,791	2,283,560	1888	235,848,944	9,089,776
1866	36,980,685	2,830,348	1889	261,853,484	10,620,636
1867	27,327,452	2,125,737	1890	236,322,828	8,991,396
1868	27,067,256	1,960,360	1891	331,887,720	11,036,018
1869	51,269,672	3,162,522	1892	312,225,293	10,211,456
1870	47,440,610	2,741,141	1893	318,782,858	9,675,061
1871	65,611,953	4,748,160	1894	331,774,424	9,011,790
1872	50,233,453	3,342,900	1895	297,448,104	8,958,690
1873	62,998,692	3,936,408	1896	272,033,262	8,776,529
1874	75,156,924	5,010,125	1897	258,514,280	8,023,893
1875	87,534,280	5,651,643	1898	249,066,912	8,329,287
1876	100,736,330	5,565,173	1899	205,394,780	10,020,495
1877	102,150,246	5,256,038	1900	203,738,195	7,632,213
1878	111,833,017	5,723,316	1901	273,141,019	9,035,437
1879	123,710,450	6,491,198	1902	187,238,485	7,306,810
1880	154,871,832	8,040,625	1903	187,654,400	8,544,135
1881	139,601,506	7,149,787	1904	219,396,078	9,246,931
1882	146,221,182	7,433,091	1905	264,328,731	12,314,017

These figures do not show the production clearly; neither can the fluctuations in the market value be ascertained from them, as the relative quantities of greasy and washed wool vary each year. In order to indicate clearly the production, washed wool should be stated as in the grease. This has been done for the purposes of the following table, and adding to the exports already shown the quantity of wool used locally in

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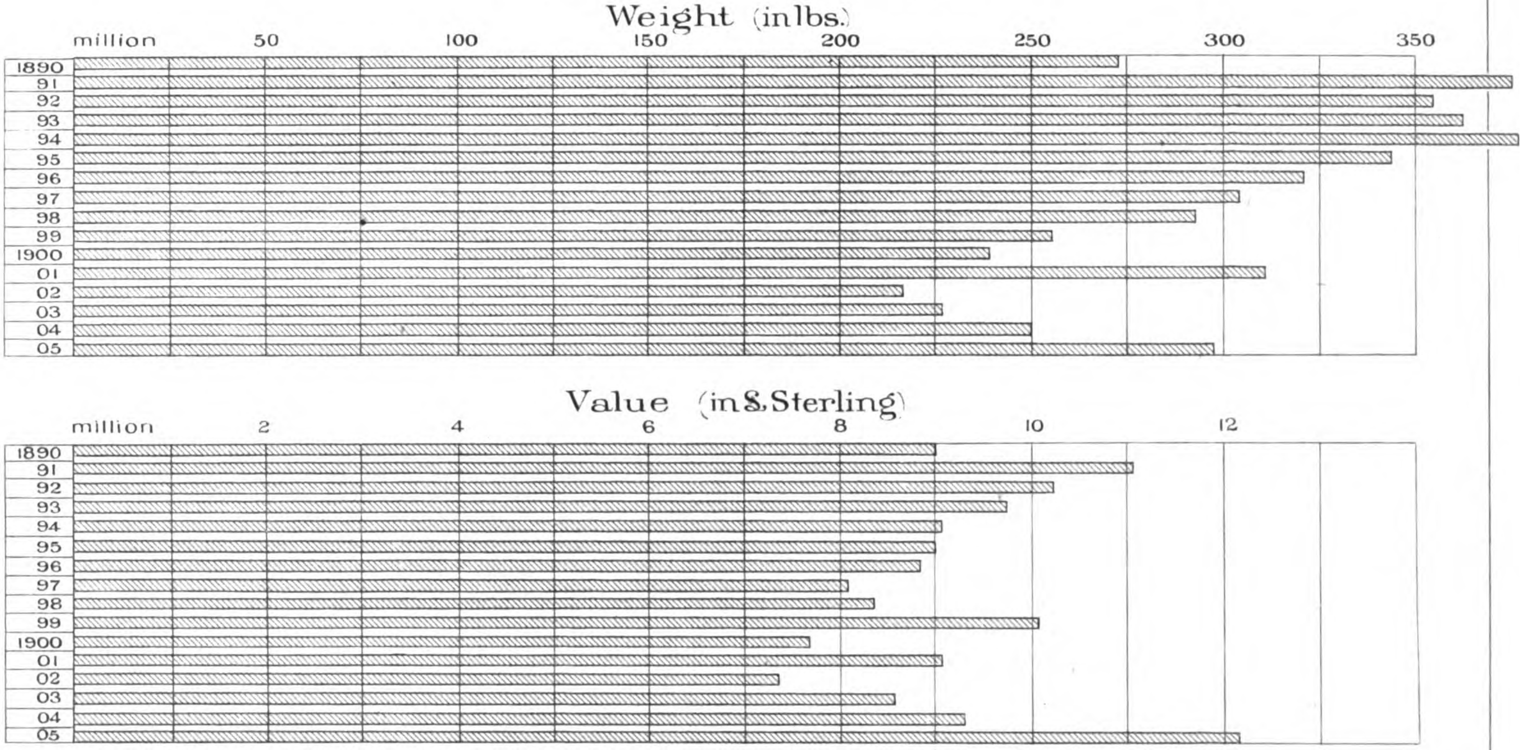
PRODUCTION OF WOOL



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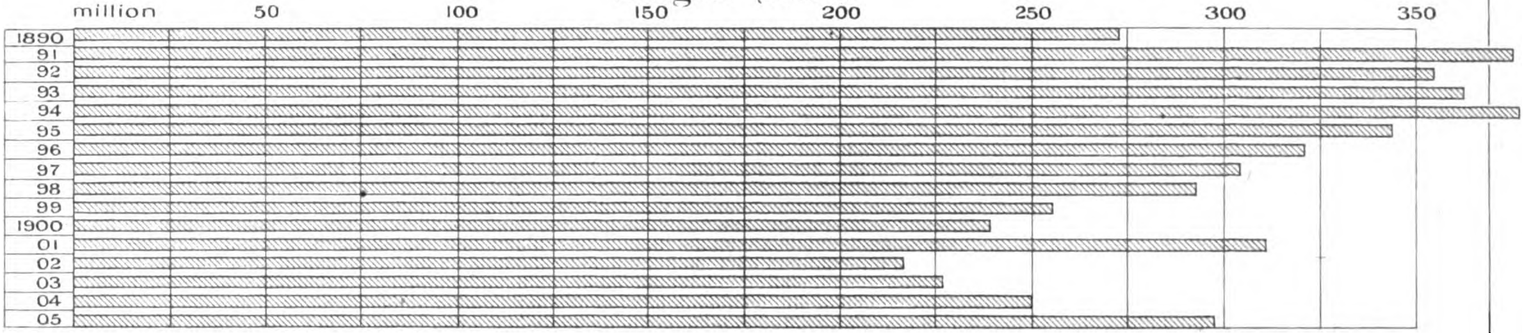
woollen mills, the total annual production, stated as in the grease, was as follows:—

Year.	New South Wales Wool.—Quantity.			Value.		
	Exported.	Used locally.	Total production.	Exported.	Used locally.	Total.
	lb.	lb.	lb.	£	£	£
1876	123,126,500	588,500	123,715,000	5,565,173	39,387	5,604,560
1877	121,295,800	991,200	122,287,000	5,256,038	43,531	5,299,569
1878	140,286,300	1,055,700	141,342,000	5,723,316	42,445	5,765,761
1879	148,196,500	1,202,500	149,399,000	6,491,198	52,059	6,543,257
1880	180,613,400	1,040,600	181,654,000	8,040,625	44,826	8,085,451
1881	160,809,300	866,700	161,676,000	7,149,787	37,414	7,187,201
1882	169,957,200	896,800	170,854,000	7,433,091	38,524	7,471,615
1883	215,459,000	799,000	216,258,000	9,598,761	36,210	9,634,971
1884	200,703,200	881,800	201,585,000	8,953,100	40,471	8,993,571
1885	192,677,000	764,000	193,441,000	7,246,642	29,092	7,275,734
1886	205,086,400	886,600	205,973,000	7,028,596	29,865	7,058,461
1887	252,110,400	852,600	252,963,000	8,911,155	30,015	8,941,170
1888	266,521,500	913,500	267,435,000	9,089,776	30,396	9,120,172
1889	295,430,400	632,600	296,063,000	10,620,636	22,453	10,643,089
1890	271,771,200	575,800	272,347,000	8,991,396	18,092	9,009,488
1891	374,742,700	857,300	375,600,000	11,036,018	23,287	11,059,305
1892	353,694,100	560,900	354,255,000	10,211,456	14,171	10,225,627
1893	361,642,600	1,222,400	362,865,000	9,675,061	29,423	9,704,484
1894	376,590,700	1,279,300	377,870,000	9,011,790	26,788	9,038,578
1895	341,337,500	1,702,500	343,040,000	8,958,690	37,896	8,996,586
1896	318,538,200	1,728,800	320,267,000	8,776,529	41,349	8,817,878
1897	302,021,700	1,293,300	303,315,000	8,023,893	29,586	8,053,479
1898	290,728,800	1,436,200	292,165,000	8,329,287	37,832	8,367,119
1899	253,574,200	1,258,800	254,833,000	10,020,495	47,917	10,068,412
1900	236,307,100	1,352,900	237,660,000	7,632,213	44,592	7,676,805
1901	308,731,900	1,343,100	310,075,000	9,035,437	36,667	9,072,104
1902	216,052,100	1,358,900	217,411,000	7,306,810	46,897	7,353,707
1903	225,710,400	1,293,600	227,004,000	8,544,135	49,015	8,593,150
1904	248,413,100	726,900	249,140,000	9,246,931	27,456	9,274,387
1905	296,409,800	744,200	297,154,000	12,314,017	30,427	12,344,444

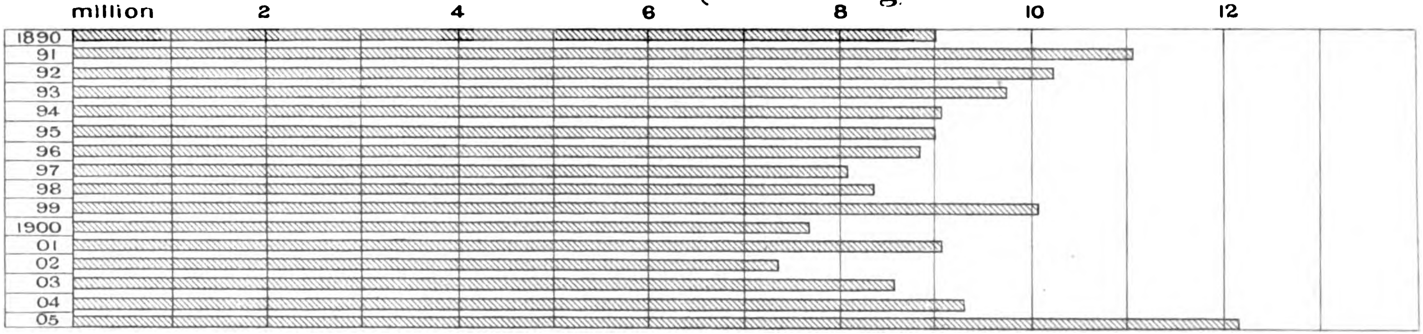
In recording the exports prior to 1876 no distinction was made between washed and greasy wool, so that any attempt to estimate the production is surrounded with difficulty. From the information available, however, it would appear that the production in 1861 was 19,254,800 lb., while in 1871 the weight in grease was 74,401,300 lb. An estimate of the production for the intervening years is, unfortunately, rendered impossible owing to the fact that in several instances the greater portion of the wool clip was held over for a considerable period, awaiting an opportunity for shipment.

PRODUCTION OF WOOL

Weight (in lbs.)



Value (in £ Sterling)



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The values given in this table represent the export prices f.o.b., and, consequently, differ from those on page 392, which show the values at the place of production.

A consideration of these figures will at once show how greatly the prosperity of the State is affected by fluctuations in the market value of its staple export, for, taking the average export at 270,000,000 lb., a rise of 1d. per lb. in the market price means an addition of £1,125,000 to the wealth of its people. A striking example is afforded by the figures of 1891 and 1905, for, notwithstanding that the production in the earlier year was the greater by 78,444,600 lb., the value was £1,285,000 less.

As the season for exporting wool does not wholly fall within the calendar year, the exports for any year consist partly of that season's clip and partly of the previous one. The following table shows the total number of sheep shorn during each year since 1891:—

Year.	Sheep and Lambs shorn.	Year.	Sheep and Lambs shorn.	Year.	Sheep and Lambs shorn.
1891	57,702,702	1896	45,997,583	1901	40,417,263
1892	55,602,188	1897	42,429,750	1902	27,639,804
1893	54,090,109	1898	41,220,440	1903	26,994,870
1894	54,234,997	1899	34,569,924	1904	31,804,772
1895	45,695,657	1900	38,400,241	1905	37,145,686

The largest number was shorn in 1891, when 20,000,000 more sheep were shorn than in 1905. Although the number has decreased since that year, the weight of the fleece has increased, as will be seen from the table given below. The figures have been taken from the annual reports of the Stock Department, but it would appear from other calculations that the averages prior to 1905 were somewhat understated:—

Year.	Estimated Average Weight of Fleece from Sheep shorn in the grease.		Year.	Estimated Average Weight of Fleece from Sheep shorn in the grease.		Year.	Estimated Average Weight of Fleece from Sheep shorn in the grease.	
	lb.	oz.		lb.	oz.		lb	oz.
1877	4	0	1886	5	5⅛	1895	5	11½
1878	5	0	1887	5	9	1896	6	4
1879	5	1	1888	5	6½	1897	5	12½
1880	5	7	1889	5	13½	1898	6	0
1881	5	0	1890	5	11¾	1899	6	0
1882	5	0	1891	5	9	1900	6	13
1883	5	2	1892	5	6	1901	6	14
1884	5	0	1893	5	15	1902	5	11
1885	5	7½	1894	6	1½	1904	6	15½
						1905	7	6¾

The figures for the year 1903 are not available. According to the returns furnished by the Chief Inspector of Stock, the average weight of fleece from each sheep during 1905 was 7 lb. 6¾ oz., and from lambs 2 lb. 8½ oz.

Of late years considerable attention has been given to the question of breeding, and the result is seen in the great improvement in the weight of fleeces. In spite of the bad seasons experienced, the wool clips have been very good, and notwithstanding the greatly diminished flocks, the total production of wool, though smaller than in previous years, has not by any means decreased proportionately. The improvement in the weight of fleece will be apparent from a consideration of the following table:—

Period.	Average number of Sheep depastured annually.	Average annual production of Wool.	Average yield of Wool per Sheep.
	No.	lb.	lb.
1881–85	36,020,700	188,762,800	5·24
1886–90	47,746,200	258,956,200	5·42
1891–96	56,297,400	362,726,000	6·44
1896–1900	41,949,300	281,648,000	6·71
1901–05	34,239,300	260,156,800	7·60

From these figures it would appear that the average weight during the last five years has been over 7½ lb. A striking proof of the increased weight of the fleece is afforded by a comparison of the figures relating to the periods ending with 1890 and 1905. In the earlier year the sheep numbered 13,500,000 more, yet the average annual production of wool was 1,200,000 lb. less than that of the later period.

Wool is put up at the stations in packs of various sizes from 4 ft. 6 in. by 2 ft. 2 in. to 5 ft. 3 in., weighing from 10 lb. to 12 lb. On many holdings the bales are "dumped" in a hydraulic press before leaving, and thus reduced to less than half their original length. During 1905-6 the average weight of a bale of greasy wool was 354 lb., and a bale of washed wool, 246 lb.

At one time almost all the wool was shipped on the grower's account and sold in London, but of late years fully 80 per cent. has been sold in the local markets, as purchasers have realised the advantages of buying on the spot:—

Season.	Total deep-sea exports (from Sydney and Newcastle).	Sydney Wool Sales.		
		Offered.	Sold at auction and privately.	Proportion of deep-sea exports sold in Sydney.
	bales.	bales.	bales.	per cent.
1887-88	396,772	227,466	145,000	36·54
1888-89	450,095	268,264	200,000	44·44
1889-90	471,484	268,790	235,000	49·84
1890-91	564,285	333,876	245,779	43·56
1891-92	626,912	361,880	278,397	44·40
1892-93	631,888	398,010	362,365	57·35
1893-94	719,450	452,571	401,185	55·76
1894-95	755,769	488,509	425,135	56·25
1895-96	683,001	441,437	415,538	60·84
1896-97	690,034	437,284	401,048	58·12
1897-98	635,002	443,066	445,808	70·21
1898-99	646,477	438,229	447,517	69·22
1899-1900	552,472	419,120	399,893	72·38
1900-01	585,291	400,034	387,358	66·18
1901-02	629,159	511,593	522,664	83·07
1902-03	473,289	374,988	383,506	81·03
1903-04	479,135	375,378	375,801	78·43
1904-05	597,174	482,453	493,510	82·64
1905-06	741,194	623,523	630,092	85·01

Of the 630,092 bales of wool sold in Sydney during the last season, it may be said that approximately 496,454 bales were purchased for the Continent of Europe, 81,754 bales for the English trade and for London on speculative account, 9,955 bales for America, 6,906 bales for Japan, and 35,023 bales by local scourers. The average prices per bale realised in Sydney during the last five years were—£10 0s. 8d. in 1901-2,

£12 8s. 6d. in 1902-3, £12 17s. 1d. in 1903-4, £12 17s. 1d. in 1904-5, and £13 19s. 6d. in 1905-6; while in the London market an average of £10 10s. was obtained in 1901, £13 2s. 6d. in 1902, £13 10s. in 1903, £14 10s. in 1904, and £15 15s. in 1905.

In comparing the prices of the Sydney and London markets, it should be remembered that in the former the season ends with June and in the latter with December, and also that a much larger proportion of the lower qualities of wool, such as pieces, bellies, locks, &c., are sold in Sydney. As freight and other charges run from 25s. to 30s. per bale, it will be seen that the Sydney market is the more favourable to producers.

The prices realised for the different descriptions of wool at the Sydney wool sales during the last two seasons are given below:—

Description.	Superior.		Good.		Medium.		Inferior.	
	1904-05.	1905-06.	1904-05.	1905-06.	1904-05.	1905-06.	1904-05.	1905-06.
	d. d.	d. d.	d. d.	d. d.	d. d.	d. d.	d. d.	d. d.
Greasy—								
Fleece	11¼ to 17¼	11¼ to 16	10 to 10¾	9¼ to 10¾	8¾ to 9¾	8¼ to 9¼	7 to 8½	6½ to 7½
Pieces	10¾ ,, 13	10¼ ,, 12½	9½ ,, 10½	9 ,, 10½	8¼ ,, 9	7¾ ,, 9	6¾ ,, 8	6½ ,, 8
Bellies	8¼ ,, 11	7¼ ,, 10½	7 ,, 8	6½ ,, 7¼	5½ ,, 6¾	5 ,, 6¼	4 ,, 5	3½ ,, 5
Lambs	10 ,, 12¾	10 ,, 12½	8¼ ,, 9¾	8 ,, 9¾	6½ ,, 8	6¼ ,, 7¾	4½ ,, 6½	4 ,, 6
Crossbred—								
Fine	12 ,, 14½	10¼ ,, 13¼	10¼ ,, 11½	9¾ ,, 11½	9 ,, 9½	8¼ ,, 9¼	7½ ,, 8½	7 ,, 8¼
Coarse	6½ ,, 9	8 ,, 9	7¾ ,, 8¼	7 ,, 8¼	6½ ,, 7½	6¼ ,, 7	5¾ ,, 6¾	5 ,, 6¼
Scoured—								
Fleece	21¼ ,, 24¼	20¼ ,, 26	19¼ ,, 20¼	19¼ ,, 20½	18 ,, 19	18 ,, 19½	16¼ ,, 17¾	16¼ ,, 18
Pieces	19¼ ,, 20¾	18¼ ,, 22½	17¾ ,, 18¾	16¾ ,, 18¾	16¼ ,, 17½	15¼ ,, 17½	14¼ ,, 15½	13¾ ,, 15¼
Bellies	16¾ ,, 19½	15¼ ,, 19½	14½ ,, 15½	13¾ ,, 15½	12¾ ,, 13¾	11¼ ,, 13¾	10 ,, 11¼	9½ ,, 11¼
Locks	14½ ,, 15¾	13¾ ,, 16¼	12¼ ,, 13½	11¼ ,, 13½	11¼ ,, 11¾	11¼ ,, 11¾	9 ,, 10½	9½ ,, 10½

In order to illustrate the fluctuations in the value of this staple, the following table has been compiled, which gives a fairly correct idea of the average value realised for greasy wool in the London market at each of the principal sales during the period:—

Year.	1st Series.	2nd Series.	3rd Series.	4th Series.	5th Series.	6th Series.
	per lb. d.	per lb. d.	per lb. d.	per lb. d.	per lb. d.	per lb. d.
1887	10⅛	10	9	8½	7½	...
1888	8	8	8	8½	8¾	...
1889	9	9½	10	10½	11¼	...
1890	10½	10	9	10	9	...
1891	9	10	9½	9	8½	...
1892	7¼	8	7⅛	7½	8	...
1893	8	8½	7⅞	8¼	7	...
1894	6⅞	6⅝	6¼	6⅝	6¼	6
1895	6	6½	6¼	7¼	8½	8½
1896	8¾	9¼	8½	8¼	7¾	8¼
1897	7¼	7	7	7¾	8¼	7¾
1898	7⅝	8	7⅝	8	8	7¾
1899	8¼	8½	9⅞	10½	11⅝	13
1900	11¾	10¾	9⅝	8⅝	7	...
1901	8¼	8	8¾	8¾	9½	...
1902	10½	10½	11½	11½	12	12½
1903	12½	12	11½	11	11	10½
1904	11	10	10⅛	11	11½	12
1905	12	11¾	12½	12⅛	12½	12½
1906	12	12¼	12½	12¼	12	...

During the period covered by the foregoing table, Sydney-shipped greasy wool realised from 13d. to 6d. The maximum prices were realised during 1899, when the sales closed at 13d. per lb. Prices rose steadily from 7½d. at the beginning of 1886 to 10d. at the close of the year, gradually falling from 10½d. to 7½d. during 1887. From 1888 to 1891 the rates ranged from 8d. to 11¼d. From 1892 the tendency was downward from 8d. to 6d. until the end of 1895, when the average was over 8d., standing between 8d. and 9d. all through 1896. During 1897 and 1898 prices were rather lower, from 7d. to 8d., but at the sales of 1899 the rate rose steadily from 8¼d. to 13d. The 1900 sales opened at 11¾d., but gradually fell to 7d. at the end of the year. The prices rose gradually to 9½d. at the close of 1901, and in the succeeding year to 12½d. In 1903 there was a gradual fall to 10½d., but at the last sales in 1904 prices again reached 12d. This value has been more than maintained during the last two years, and at the close of 1906 wool commanded a higher price than at any of the previous sales during the year.

There is no cause to view unfavourably the further extension of the production of wool in these States. In the ancient seats of wool-growing, production is now stationary, if not actually diminishing, while population, with the consequent demand for wool, is everywhere increasing. The wool supplies of the world have of late years shown no material increase, and there are no signs of an increase of production in the near future. The number of sheep in the chief countries of the world, as shown on page 394, is less than it was ten years ago, and although the Argentine is estimated to carry 120,000,000 sheep at present, the export of wool is not equal to that of Australasia. The exports of Argentine in each of the five years ended with 1902 were 221,286, 237,111, 101,113, 228,358, and 197,936 tons respectively, each ton representing 2,025 lb. It is probable, too, that any advance in the quantity of wool available from Australia or from the River Plate will be more than counterbalanced by a restricted production in Great Britain, North America, and the Continent of Europe. A new market has been found for Australian wool in Japan, a country which carries an immense population, and it is confidently anticipated that the present exports will be largely increased, as Australia is the natural source from which supplies should be obtained.

It is a moot question whether the climate of New South Wales is better adapted to the production of a combing than a clothing wool. Although the former is looked upon with most favour by wool-growers, it is generally recognised that there are very large tracts of country, especially where the saltbush predominates, on which it is difficult to raise a good combing wool, and where it will probably be found more profitable by wool-growers to give greater attention to the production of the clothing variety.

The production of wool in each of the Australian States and New Zealand during 1905 was as follows:—

State.	Quantity in the Grease.
	lb.
New South Wales	297,154,000
Victoria	66,350,000
Queensland	69,681,000
South Australia	37,534,000
Western Australia	17,720,000
Tasmania	10,530,000
Commonwealth	498,969,000
New Zealand	172,975,000
Australasia	671,944,000

The production of New South Wales represented more than 55 per cent. of the total in the Commonwealth.

FREIGHTS ON WOOL.

The freights paid for the carriage of wool to London determine, within certain limits, the freight of most other produce. Information regarding freights is not available for early years, but since 1857, as the following figures show, the freights on pressed greasy wool have fallen 50 per cent. :—

Year.	Freight per lb.	Year.	Freight per lb.	Year.	Freight per lb.
1857	⅝d.	1874	⅝d.	1891	7/16d.
1858	⅝d.	1875	⅝d.	1892	11/32d.
1859	⅝d.	1876	½d.	1893	13/32d.
1860	⅝d.	1877	⅝d.	1894	13/32d.
1861	⅝d.	1878	7/16d.	1895	11/32d.
1862	⅝d.	1879	½d.	1896	5/16d.
1863	⅝d.	1880	11/16d.	1897	⅜d.
1864	⅝d.	1881	⅞d.	1898	⅜d.
1865	½d.	1882	⅝d.	1899	7/16d.
1866	⅝d.	1883	½d.	1900	½d.
1867	¾d.	1884	⅝d.	1901	⅜d.
1868	9/16d.	1885	⅝d.	1902	5/16d.
1869	½d.	1886	⅝d.	1903	5/16d.
1870	⅝d.	1887	⅝d.	1904	5/16d.
1871	⅝d.	1888	7/16d.	1905	5/16d.
1872	⅝d.	1889	7/16d.		
1873	⅝d.	1890	7/16d.		

This table shows the freights charged in sailing vessels only, and is chiefly interesting by reason of the comparison it affords with earlier years. Most of the wool is now forwarded by steamers, and the rate charged by the large cargo-carriers in November, 1906, were 9/16d. per lb. for greasy and 11/16d. for scoured wool, while mail-steamers obtained a rather higher rate.

CATTLE.

Though still a most important industry, cattle-rearing does not now occupy so prominent a position as was formerly the case. The number of horned cattle returned at the end of each year since 1861 is shown in the subjoined table. It will be noticed that there was a great decline in the total from 1875 to 1885, but that the number steadily increased from 1885 to 1894, when it stood at 2,465,411. Owing to unfavourable seasons the numbers decreased until in 1902 the total was only 1,741,226, but within the last three years there has been a partial recovery, and the number at the close of 1905 was 2,337,973.

Year.	Cattle.	Year.	Cattle.	Year.	Cattle.
1860	2,408,586	1876	3,131,013	1892	2,221,459
1861	2,271,923	1877	2,746,385	1893	2,269,852
1862	2,620,383	1878	2,771,583	1894	2,465,411
1863	2,032,522	1879	2,914,210	1895	2,150,057
1864	1,924,119	1880	2,580,040	1896	2,226,163
1865	1,961,905	1881	2,597,348	1897	2,082,096
1866	1,771,809	1882	1,859,985	1898	2,029,516
1867	1,728,427	1883	1,640,753	1899	1,967,081
1868	1,761,411	1884	1,425,130	1900	1,983,116
1869	1,795,904	1885	1,317,315	1901	2,047,454
1870	2,195,096	1886	1,367,844	1902	1,741,226
1871	2,014,888	1887	1,575,487	1903	1,880,578
1872	2,287,660	1888	1,622,907	1904	2,149,129
1873	2,794,327	1889	1,741,592	1905	2,337,973
1874	2,856,699	1890	2,091,229		
1875	3,134,086	1891	2,128,838		

The principal breeds of cattle now in the State are the Durham or Shorthorns, Hereford, Devon, Black-polled, Ayrshire, Alderney, Jersey, and crosses from these various breeds. At the close of the year 1905 the numbers of each breed, as far as could be ascertained, were:—

Breed of Cattle.	Pure and Stud.	Ordinary.	Total.
	No.	No.	No.
Shorthorn	63,878	507,459	571,337
Hereford	24,445	146,807	171,252
Devon	9,018	54,670	63,688
Black-polled	2,380	7,241	9,621
Red-polled	589	1,202	1,791
Ayrshire	7,175	27,470	34,645
Alderney	2,005	4,465	6,470
Holstein	432	2,436	2,868
Jersey	6,468	18,445	24,913
Guernsey	40	221	261
Highland	......	50	50
Total	116,430	770,466	886,896
Crosses (first crosses)—			
Shorthorn—Hereford	......	295,004	295,004
,, Devon	......	160,093	160,093
Hereford ,,	......	53,713	53,713
Ayrshire—Shorthorn	......	90,833	90,833
Alderney ,,	......	1,000	1,000
Black-polled ,,	......	21,809	21,809
Red-polled ,,	......	1,000	1,000
Jersey ,,	......	24,399	24,399
Holstein ,,	......	2,991	2,991
Unrecognisable	......	502,962	502,962
Total	......	1,153,804	1,153,804
	116,430	1,924,270	2,040,700

There were, in addition, 297,273 head not classified, which were for the most part in the towns.

There has been a comparatively large increase in the number of milking cattle, as many of the farmers in the coastal districts have turned their attention to dairying, with very satisfactory results. The number of milch cows at the close of the year 1905 was 442,950.

The breed of cattle throughout the State is steadily improving—a result due to the introduction of good stud stock; to greater attention and care exercised in selection and breeding, more particularly for dairying purposes; and to culling and keeping in paddocks. In order to encourage and assist dairy farmers in improving the breed of their cattle the Government of the State imported some high-class stud bulls from England, which may be leased for a short period at a small fee. There are now twenty-four of these bulls distributed amongst the chief centres of the dairying industry.

Importations from Europe and America were prohibited for many years owing to the natural dread of the stockowners lest their herds should contract diseases which have devastated the cattle of other countries. The prohibition was removed in 1888, and cattle are now admitted after strict quarantine. The number so admitted in 1905 was 34—16 bulls and 18 cows. In addition, a number of stud cattle were imported from the other States, principally for dairying purposes.

The breeding cows in 1905 numbered 602,223, and as there were 396,697 calves branded, the average calving was about 66 per cent., which may be regarded as very satisfactory.

Australian cattle, probably because they live in a more natural state, are, on the whole, remarkably free from milk-fever and other complaints attendant on calving. A large number of calves are reared on separated milk, to which a little pollard, grain, linseed jelly, or oilcake is added; and, with the more general adoption of simply-contrived stalls, which enable the calves to take their food peacefully per medium of a teat, the percentage of losses from white score and other evils resulting from improper feeding is being reduced.

HORSES.

Australasia is eminently fitted for the breeding of horses, and as at an early period the stock of the country was enriched by the importation of some excellent thoroughbred Arabians from India, Australian horses soon acquired a high reputation. The abundance of good pasture everywhere obtainable also tended to bring about this desirable result. The native kangaroo-grass, especially when in seed, is full of saccharine matter, and young stock thrive excellently upon it. This abundance of natural provender allowed of a large increase in the stock of the settlers, which would have been of great advantage had it not been that the general cheapness of horses led to a neglect of the canons of breeding. In consequence of the discovery of gold, however, a notable increase in price took place. Under ordinary conditions this circumstance would have been favourable to the breed, and such was the case in Victoria; but in New South Wales it was far otherwise. The best of its stock, including a large proportion of its most valuable breeding mares, was taken by Victoria, with the result that for twenty years after the gold rush the horses of the State greatly deteriorated. One class of stock alone escaped —the thoroughbred racer—which was improved, both by the importation of fresh stock from England and by the judicious selection of mares. The period of deterioration ended about the year 1870, since which year there has been a perceptible improvement in all classes, and horses bred in the State now find a ready market in India, Japan, China, and other countries. The number steadily increased from 1883 to 1894, when it stood at 518,181; but, owing to the drought, the total in 1895 fell to 499,943. In 1896 there was an increase to 510,636, attributed to increased settlement, more breeding, and fewer sales owing to low prices. In 1897 the number of horses was 498,034; in 1898 it was 491,553; but in 1902 it had fallen to 450,125. During the last two years there has been a substantial increase, and the number at the end of 1905 again exceeded half a million.

The following table shows the number of horses at the end of each year since 1860:—

Year.	Horses.	Year.	Horses.	Year.	Horses.
1860	251,497	1876	366,703	1892	484,309
1861	233,220	1877	328,150	1893	493,231
1862	273,389	1878	336,468	1894	518,181
1863	262,554	1879	360,038	1895	499,943
1864	284,567	1880	395,984	1896	510,636
1865	282,587	1881	398,577	1897	498,034
1866	274,437	1882	328,026	1898	491,553
1867	280,201	1883	326,964	1899	482,200
1868	280,818	1884	337,172	1900	481,417
1869	280,304	1885	344,697	1901	486,716
1870	337,597	1886	361,663	1902	450,125
1871	304,100	1887	390,609	1903	458,014
1872	328,408	1888	411,368	1904	482,663
1873	334,462	1889	430,777	1905	506,884
1874	346,691	1890	444,163		
1875	357,696	1891	469,647		

For purposes of classification the horses of the State have been divided into draught, light-harness, and saddle horses, and the numbers of each particular kind, so far as could be ascertained, were as follow:—

Class.	Thoroughbred.	Ordinary.	Total.
Draught	15,444	123,414	138,858
Light-harness	10,325	110,519	120,844
Saddle	21,987	140,495	162,482
Total	47,756	374,428	422,184

The Stock Department did not receive returns relating to the remaining 84,700 animals.

New South Wales is specially suitable for the breeding of saddle and light-harness horses, and it is doubtful whether these particular breeds of Australian horses are anywhere surpassed. On many of the large holdings thoroughbred sires are kept, and the animals bred combine speed with an astonishing power of endurance. Fed only on the ordinary herbage of the country, these animals are constantly required to perform long journeys across difficult country, and they become hardy and sure-footed to a degree. It is the possession of these qualities which gives them their great value as army remounts.

The approximate number of animals fit for market is as follows:—

Draught	18,102
Light-harness	21,262
Saddle	28,248
Total	67,612

Of these it is estimated that 23,926 are suitable for the Indian and other markets.

A considerable number of horses are exported annually to countries outside Australasia, the number in 1905 being 5,321, valued at £115,276. The total exports during the year numbered 13,553, with a value of £354,282. Little notice should, however, be paid to the exports to other States of the Commonwealth and New Zealand, as the great majority of the animals are racehorses journeying to fulfil engagements therein, or returning from similar visits to New South Wales. The following table shows the export trade since 1891 :—

Year.	Country to which Exported—						
	Other States.	New Zealand.	India.	South Africa.	Japan.	Other Countries.	Total.
			Horses—Number.				
1891	3,438	1	440	......	......	351	4,280
1892	3,069	24	865	......	......	629	4,587
1893	2,560	97	213	......	......	492	3,362
1894	2,454	989	895	......	......	268	4,606
1895	2,471	1,054	1,064	......	......	630	5,219
1896	5,371	476	1,666	......	......	699	8,212
1897	6,243	711	1,189	104	......	572	8,819
1898	4,772	492	1,983	1	......	632	7,880
1899	7,865	335	1,111	1,200	......	885	11,396
1900	11,395	199	1,688	7,714	......	1,983	22,979
1901	11,282	235	998	6,300	2	943	19,760
1902	9,437	74	834	2,918	......	664	13,927
1903	7,120	398	1,249	145	1	1,292	10,205
1904	10,181	138	1,771	169	66	1,275	13,600
1905	8,109	123	1,922	8	1,631	1,760	13,553
			Value.				
	£	£	£	£	£	£	£
1891	145,308	150	8,800	......	......	9,556	163,814
1892	167,261	3,450	19,490	......	......	12,691	202,892
1893	80,229	5,930	5,320	......	......	16,021	107,500
1894	68,747	13,572	9,447	......	......	4,894	96,660
1895	57,559	14,006	12,765	......	......	13,130	97,460
1896	88,022	4,134	23,800	......	......	11,127	127,083
1897	124,615	8,786	18,460	1,705	......	15,503	169,069
1898	123,814	6,396	26,364	500	......	16,109	173,183
1899	142,263	6,152	19,020	25,025	......	20,632	213,092
1900	183,705	4,376	18,521	124,485	.....	57,578	388,665
1901	205,619	6,398	17,076	81,204	100	19,873	330,270
1902	191,163	1,852	15,044	38,116	......	15,566	261,741
1903	210,437	11,849	21,309	7,775	15	31,889	283,274
1904	248,130	8,040	32,074	3,727	7,975	32,235	332,181
1905	229,318	9,688	42,774	1,780	26,495	44,227	354,282

It will be seen that for many years India has offered the best market for horses. The demand for horses in that country is considerable, and Australia is a natural market from which supplies may be derived. During 1904 New South Wales was visited by agents from Japan, who purchased a number of high-class horses, on behalf of their Government, for delivery in 1904 and 1905.

Of the exports to other countries, nearly the whole go to the Straits Settlements, New Caledonia, Fiji, or other islands in the Pacific.

PASTORAL PROPERTY.

Pastoral property and stock form the largest factor in the wealth of New South Wales, and the return derived therefrom is the largest source of the income of its inhabitants. It is impossible to satisfactorily estimate the value of the land privately owned and devoted to pastoral pursuits, but it would appear that no less than £41,400,000 has been expended in improvements thereon. In addition, a further sum of over £10,200,000 has been spent on land held under lease from the Crown, so that considerably over 50 millions sterling has been expended on improvements alone.

The value of the improvements on pastoral estates was estimated in 1902 at £51,627,000. The following are the items as shown in the report of the Chief Inspector of Stock, who was, unfortunately, unable to supply any later information:—Cost of fencing, £32,264,000; dams, £2,148,000; tanks, £8,641,000; wells and bores, £878,000; making a total of £43,931,000. In addition, it is estimated that the value of buildings, &c., was £4,786,000, and of ringbarking, £2,910,000, bringing the total value of all improvements up to £51,627,000, as shown above.

The value of live stock, excluding dairy cattle and swine, on 31st December, 1905, amounted to £42,910,000, and if they were included, to £47,567,000. From the nature of the industry, it is difficult to arrive at a correct estimate of the return from pastoral pursuits as at the point of production; but taking the Sydney prices as a basis, and making due allowance for incidental charges, such as agistment, railway carriage or freight, and commission, this value in 1905 would appear as £17,113,000. The return received from the different kinds of stock are shown in the following table, for various years since 1892:—

Year.	Value of Pastoral Production.							
	Sheep for Food.	Wool.	Cattle.	Horses.	Total.	Per Head of Population.		
	£	£	£	£	£	£	s.	d.
1892	2,367,000	9,996,000	1,535,000	827,000	14,725,000	12	10	3
1896	1,745,000	8,619,000	990,000	420,000	11,774,000	9	5	4
1901	2,071,000	8,425,000	1,374,000	682,000	12,552,000	9	2	11
1902	1,446,000	7,152,000	1,322,000	811,000	10,731,000	7	14	0
1903	2,327,000	8,361,000	1,339,000	750,000	12,777,000	8	19	7
1904	2,206,000	9,133,000	1,347,000	687,000	13,373,000	9	4	11
1905	2,753,000	12,103,000	1,533,000	724,000	17,113,000	11	11	6

It will be seen that the value of production in 1905 was greater than in any of the other years quoted, and, indeed, was the highest on record, notwithstanding the fact that the number of stock depastured was not nearly so great as in some of the earlier years. It is, indeed, satisfactory to note the rapid recovery which has been made since 1902, and there is every reason to believe that the results of the year 1906 will surpass those of 1905, as the prices of all pastoral products have been well maintained, and the wool-clip has been a heavy one.

In order to exhibit clearly the extent of the variation in the prices of pastoral products, the following table has been prepared, showing the price-level in each year since 1901. The figures are calculated on the average prices of exports to the United Kingdom free on board ship at Sydney. The prices of 1901 are taken as a basis, and assumed to equal 1,000. The articles include wool, tallow, leather, frozen beef and mutton, and skins and hides:—

Article.	1901.	1902.	1903.	1904.	1905.	1906.
Wool—greasy	1,000	1,111	1,233	1,200	1,300	1,433
„ scoured	1,000	1,258	1,396	1,415	1,396	1,509
Tallow	1,000	1,170	1,045	910	937	1,031
Leather	1,000	1,017	1,067	983	1,078	1,183
Frozen Beef	1,000	1,000	1,000	813	1,000	875
„ Mutton	1,000	1,000	1,000	1,214	1,031	1,125
Skins—Hides	1,000	1,000	1,013	1,092	1,250	1,375
„ Sheep, with wool	1,000	1,209	1,246	1,266	1,541	2,000
All articles	1,000	1,096	1,125	1,112	1,192	1,316

Hitherto in these pages the various classes of stock have been treated separately, but in order to give a more definite idea of the development of the pastoral resources of New South Wales, the following table has been compiled, showing at quinquennial periods from 1860 to 1890, and annually thereafter, the stock that has been actually depastured in the State. For the sake of convenience, the numbers of cattle and horses are expressed in terms of sheep—that is, allowance has been made at the rate of ten sheep for each head of large stock, so that the total shows what would have been the result had the cattle and horses been replaced by their equivalent of sheep. There is also shown the number of acres of land to each sheep of the totals thus found, as well as the number of such sheep per head of the population:—

Year.	Sheep.	Other stock expressed in terms of sheep.	Total.	Area per sheep.	Sheep per head of population.
	No.	No.	No.	acres.	No.
1860	6,119,163	26,600,830	32,719,993	5·99	94
1865	8,132,511	22,444,920	30,577,431	6·41	75
1870	16,308,585	25,326,930	41,635,515	4·70	83
1875	25,353,924	34,917,820	60,271,744	3·25	101
1880	35,398,121	29,760,240	65,158,361	3·01	87
1885	37,820,906	16,620,120	54,441,026	3·60	57
1890	55,986,431	25,353,920	81,340,351	2·41	71
1891	61,831,416	25,984,850	87,816,266	2·23	75
1892	58,080,114	27,057,680	85,137,794	2·30	71
1893	56,980,688	27,630,830	84,611,518	2·32	69
1894	56,977,270	29,835,920	86,813,190	2·26	69
1895	47,617,687	26,500,000	74,117,687	2·64	58
1896	48,318,790	27,367,990	75,686,780	2·59	58
1897	43,952,897	25,807,300	69,760,197	2·81	53
1898	41,241,004	25,210,690	66,451,694	2·95	49
1899	36,213,514	24,492,810	60,706,324	3·23	45
1900	40,020,506	24,645,330	64,665,836	3·03	47
1901	41,857,099	25,341,700	67,198,799	2·92	49
1902	26,649,424	21,913,510	48,562,934	4·03	35
1903	28,656,501	23,385,920	52,042,421	3·76	36
1904	34,526,894	26,317,920	60,844,814	3·22	42
1905	39,506,764	28,448,570	67,955,334	2·88	46

LIVE STOCK OF THE WORLD.

The following table has been compiled from the latest information available, showing the number of each kind of stock in the principal countries of the world. With the exception of sheep, the live stock of Australasia forms but a small proportion of the total:—

Country.	Horses.	Cattle.	Sheep.	Swine.
British Empire—				
United Kingdom	2,117,000	11,674,000	29,077,000	3,602,000
Australasia	2,000,000	10,336,000	93,535,000	1,264,000
British South Africa	510,000	3,453,000	15,694,000	531,000
Canada	1,501,000	5,846,000	2,987,000	2,369,000
India and Ceylon	1,275,000	90,376,000	17,997,000	104,000
Other British Possessions	160,000	310,000	1,038,000	95,000
Total, British Empire	7,563,000	121,995,000	160,328,000	7,965,000
Foreign Countries—				
Algeria	232,000	1,082,000	8,959,000	87,000
Argentine	4,447,000	30,000,000	120,000,000	800,000
Austria-Hungary	4,025,000	16,250,000	10,744,000	12,013,000
Bulgaria	344,000	1,768,000	6,868,000	462,000
Denmark	487,000	1,840,000	877,000	1,457,000
France	3,139,000	14,137,000	17,801,000	7,522,000
Germany	4,267,000	19,322,000	7,907,000	19,821,000
Italy	742,000	5,000,000	6,900,000	1,800,000
Mexico	859,000	5,142,000	3,424,000	616,000
Norway	173,000	950,000	999,000	165,000
Roumania	864,000	2,589,000	5,655,000	1,700,000
Russia	29,112,000	45,044,000	64,698,000	13,040,000
Spain	397,000	2,218,000	13,359,000	1,928,000
Sweden	547,000	2,546,000	1,167,000	816,000
United States	17,058,000	61,242,000	45,170,000	47,321,000
Uruguay	575,000	6,327,000	17,625,000	48,000
Other Foreign Countries	2,360,000	7,031,000	4,076,000	3,726,000
Total, Foreign Countries	69,628,000	222,488,000	336,229,000	113,322,000
Total, All Countries	77,191,000	344,483,000	496,557,000	121,287,000

The list of countries is by no means complete, so that these figures are somewhat short of the truth. As the interests of New South Wales are most closely concerned with sheep breeding, the following information regarding the position in other countries may be of value. In 1873, the earliest year for which information is available, France had 26,000,000 sheep, and Germany 25,000,000; the latest returns show but 18,000,000 and 8,000,000 respectively. In Austria and Hungary, there has been a decrease of about 10,000,000 in the same period. The figures for the United States show but little increase since 1880, when there were 41,000,000 sheep; while in the United Kingdom there were only 29,000,000 in 1905, as against 33,000,000 in 1875. The Argentine shows a large increase since 1888, when the numbers were ascertained to be 67,000,000; but the present numbers may be considerably over-estimated, as the export of wool shows no corresponding increase. The number of sheep in Australasia represents about 19 per cent. of the world's total.

SLAUGHTERING.

Slaughtering for food is permitted only in places licensed for the purpose, but such establishments are very numerous. In the metropolitan district there are 62, and in the country districts 1,506 slaughter-yards, employing respectively 433 and 4,137 men; in all, 1,568 establishments and 4,570 men.

The consumption of meat cannot be given accurately for the metropolitan and country districts separately, as several of the largest country slaughter-yards are carried on for the purpose of supplying the metropolitan market. For New South Wales generally, it is estimated that the average annual consumption of mutton per inhabitant is about 100 lb., of beef 146 lb., and of pork and bacon 13 lb., making a total consumption of 259 lb.

The following table shows the number of stock slaughtered during 1905:—

Stock.	Number slaughtered in 1905.		
	Metropolitan.	Country.	Total.
Sheep	1,403,632	2,555,945	3,959,577
Lambs	41,382	282,672	324,054
Bullocks	74,138	162,168	236,306
Cows	7,589	57,249	64,838
Calves	15,247	4,466	19,713
Swine	116,581	172,515	289,096

These figures represent the stock slaughtered for all purposes. Of the sheep and lambs, 2,612,988, including 905,579 killed on stations and farms, represent the local consumption; 356,894 sheep were required by meat-preserving establishments; 1,306,160 for freezing for export; while 7,589 were boiled down for tallow. All the cattle killed, except 10,931 treated in the meat-preserving works and 3,435 exported frozen, were required for local consumption; and of the swine, 145,000 were cured as bacon, and 144,000 killed for ordinary consumption.

The following table shows the slaughter of stock in the various establishments for ten years:—

Year.	Establishments.	Hands Employed.	Sheep.	Lambs.	Cattle.			Swine.
					Bullocks.	Cows.	Calves.	
1896	1,904	5,959	6,077,420	119,329	232,875	98,910	19,461	197,971
1897	1,869	5,563	5,670,845	119,258	244,085	100,302	21,511	190,047
1898	1,820	5,391	5,499,049	166,714	222,220	119,229	22,598	204,492
1899	1,798	5,158	4,603,225	192,034	244,184	114,753	25,011	202,608
1900	1,770	4,853	4,197,026	162,487	239,038	139,118	21,841	227,379
1901	1,642	4,675	4,372,016	147,117	202,795	113,874	19,654	248,811
1902	1,548	3,685	4,502,513	183,337	164,916	99,450	23,765	208,852
1903	1,702	3,991	3,180,408	96,712	157,173	103,471	14,555	178,157
1904	1,598	3,961	2,927,078	131,458	211,839	72,778	14,472	232,955
1905	1,568	4,570	3,959,577	324,054	236,306	64,838	19,713	289,096

The value of stock slaughtered can be determined with exactness only for the metropolitan market.

The prices of stock show great variation in the course of a year. In cross-bred sheep the average monthly values at the Homebush sale-yards during 1905 ran from 11s. 3d. paid for medium ewes during January to 22s. paid in August for extra prime cross-bred wethers, while in merino sheep the highest value reached was 22s. 3d., and the lowest 8s. 9d. The prices of sheep vary not only with the class and condition of the animal and the number on the market, but also in accordance with the season and the growth of the fleece. The average values of good cross-bred wethers and ewes during 1905 were 16s. and 15s. 6d. respectively; merino wethers were practically equal to cross-breds in value, but ewes were about 3s. to 4s. less valuable. Good lambs were worth about 13s. 6d. throughout the year. In cattle, the prices ranged from £12 14s. paid in April for extra prime bullocks to £5 6s. in February for medium cows. The general average for good bullocks was about £9, and for good cows about £6 15s. Best beef averaged about 23s. per 100 lb. Porkers brought an average price of 24s. 6d. during the year, while baconers realised an average of 37s., going up to 43s. 9d. in December.

SURPLUS STOCK.

In view of the rapid increase in the number of sheep during favourable seasons, it is apparent that with a succession of good seasons there arises a danger of over-stocking. The question of disposing profitably of the surplus stock thus becomes a matter of vital importance, and as the meat-preserving works are unable to absorb the whole, it becomes necessary to look outside the State for a solution of the question. It was this necessity which led to the establishment of the export trade in frozen mutton, now an important and valuable branch of the pastoral industry. In regard to cattle there is not the same difficulty, since the cast has barely sufficed to meet local requirements for food.

THE MEAT EXPORT TRADE.

The table given below shows the growth of the export trade in New South Wales meat since the introduction of the system of shipping mutton in a frozen state in 1881. The export of frozen meat varies, of course, with the seasons. In regard to mutton, the State is rather at a disadvantage, as the qualities of the merino as a food are not greatly appreciated in the English market. It has been proved, however, that a great expanse of country is suited to the breeding of large-carcase sheep, and pastoralists have lately turned their attention in this direction, with a view to securing a larger share in the meat trade of the United Kingdom :—

Year.	Frozen or Chilled Meat.				Preserved Meat.	
	Beef.	Mutton.	Total Weight.	Total Value.	Weight.	Value.
	quarters.	carcases.	cwt.	£	lb.	£
1881	......	....	9,980	8,554	....	*176,721
1882	......	....	13,782	22,910	....	*143,801
1883	......	....	34,911	43,100	....	*221,912
1884	......	....	13,309	12,321	....	*161,477
1885	......	....	6,271	6,064	....	*166,561
1886	......	....	4,852	4,671	....	*77,756
1887	......	....	21,831	19,310	9,761,154	150,714
1888	......	....	52,262	44,537	4,528,269	69,481
1889	......	....	37,868	33,426	2,877,303	52,321
1890	......	....	72,304	71,534	4,655,523	74,329
1891	......	....	105,013	101,828	6,581,713	87,632
1892	.....	....	223,074	169,425	8,620,747	105,922
1893	4,773	364,958	220,584	141.640	13,092,942	164,592
1894	9,538	533,995	339,404	193,760	16,362,597	206,054
1895	88,719	1,021,006	607,818	380,107	22,384,285	302,828
1896	16,286	1,372,373	642,188	343,397	16,351,936	218,292
1897	28,529	1,065,990	503,925	275,118	10,903,611	147,165
1898	39,593	1,095,568	539,495	330,325	13,030,801	227,288
1899	32,855	956,222	459,553	331,904	11,453,332	185,804
1900	86,948	951,891	540,426	541,395	11,966,326	221,604
1901	72,662	963,614	510,148	578,923	12,396,011	260,455
1902	12,130	510,466	221,126	263,170	10,884,786	242,915
1903	6,988	334,533	143,892	199,675	4,709,976	97,068
	cwt.	cwt.				
1904	4,201	207,721	211,922	290,065	7,251,911	135,073
1905	19,580	463,567	483,147	641,216	9,634,636	200,224

* Including Extract of Meat.

The following statement, compiled from the British trade returns, shows the imports of frozen mutton into the United Kingdom during the past five years, and also the quantity imported from New South Wales:—

Year.	Total Imports.		Imports from New South Wales.	
	Quantity.	Value.	Quantity.	Value.
	cwt.	£	cwt.	£
1901	3,608,229	6,598,080	315,575	562,344
1902	3,659,599	6,914,911	105,473	193,181
1903	4,016,622	7,826,062	37,502	73,406
1904	3,494,782	6,861,531	67,200	130,839
1905	3,811,069	7,336,490	244,033	470,482

Below is given a statement of the average wholesale prices obtained during the past twenty years for English and frozen mutton sold in London. From an examination of the figures it would seem that the class of people requiring locally-grown mutton in England is quite distinct from that using frozen mutton:—

Year.	Best English.	New Zealand.	Australian.	River Plate.	Year.	Best English.	New Zealand.	Australian.	River Plate.
	d.	d.	d.	d.		d.	d.	d.	d.
1886	8	5⅛	4½	4¾	1896	6⅞	3⅝	2⅝	2⅝
1887	6⅛	4⅛	4	3 7/10	1897	7⅛	3⅝	2½	2½
1888	7½	4½	4 1/12	3 1/10	1898	7	3¾	2½	2½
1889	8¼	5 1/12	4⅝	4⅛	1899	7¼	3⅞	2⅞	2⅞
1890	8	4⅝	3 11/12	3⅝	1900	7¾	4	3½	3½
1891	7	4¼	3⅛	3⅛	1901	7	3½	3¼	3¼
1892	7	4⅛	3⅛	3⅛	1902	7	4½	3½	3¾
1893	6⅛	4¼	3¼	3½	1903	7¼	4	3½	3¾
1894	7⅝	4⅛	2⅞	2⅞	1904	7¼	4½	4	3¾
1895	7½	3⅞	2⅞	2⅞	1905	7¼	4½	3½	3¾

In addition to the export of frozen beef and mutton, there has grown up in the last few years a considerable trade in frozen rabbits and hares, details of which appear in the chapter on "Dairying and Minor Industries."

OTHER PASTORAL PRODUCTS AND BY-PRODUCTS.

The minor products arising from pastoral occupations include tallow, edible fat and lard, skins and hides, furs, horns, hoofs, bones, and hair. Some of these are more specially dealt with in the chapter on manufactories and works, and need here only brief mention.

The production of tallow has declined considerably since 1897, consequent on the decrease in the number of live stock depastured, and the falling-off in the market value of the article. In 1905, however, the price rose considerably, and the largest quantity for nine years was produced. In earlier years the production was much greater than for any of the years shown hereunder, for in each of the years 1894 and 1895 it reached nearly 54,000 tons :—

Year.	Estimated Quantity of Tallow.		
	Produced.	Locally consumed.	Exported.
	tons.	tons.	tons.
1896	28,549	8,346	20,203
1897	32,849	8,593	24,256
1898	23,305	6,713	16,592
1899	19,492	7,139	12,353
1900	22,221	6,768	15,453
1901	22,536	6,206	16,330
1902	11,559	3,884	7,675
1903	11,760	5,710	6,050
1904	17,840	5,897	11,943
1905	24,637	5,686	18,951

For many years the exports of skins and hides have reached a large value, while recently there has been a considerable export of rabbit and hare skins. The following table shows the value of skins exported during the last six years :—

Year.	Value of Skins and Hides exported.					
	Cattle.	Horse.	Sheep.	Rabbit and Hare.	Other.	Total.
	£	£	£	£	£	£
1900	90,861	248	146,540	4,182	118,882	360,713
1901	158,953	170	202,407	13,291	199,954	574,775
1902	108,152	2,854	344,399	38,094	330,597	824,096
1903	85,332	2,200	242,307	38,233	193,524	561,596
1904	113,977	*.........	160,425	105,952	82,224	462,578
1905	187,517	1,391	361,212	162,783	133,006	845,909

* Included with cattle skins.

The other products of the pastoral industry are of minor importance, as leather is classified as a product of the manufacturing industry. In connection with the leather industry, it may be mentioned that a serious drawback to extended trade results from careless flaying, while the use of large brands in a prominent position on the beast also detracts considerably from the value of the hide. The values of the exports of minor products for the last six years were as follow :—

Year.	Value of Exports.				
	Hoofs, Horns, and Bones.	Hair.	Edible Fat—Lard.	Glue Pieces—Sinews.	Furs.
	£	£	£	£	£
1900	20,128	8,155	630	10,346	2,465
1901	14,947	11,420	1,049	6,047	1,441
1902	12,713	8,226	657	5,054	909
1903	10,567	7,387	2,601	7,424	917
1904	14,856	9,655	4,340	6,538	1,979
1905	15,559	12,102	4,509	5,484	3,645

EMPLOYMENT IN PASTORAL PURSUITS.

The number of persons engaged in pastoral pursuits is not increasing proportionately to population, as such persons represented only 2·36 per cent. in 1901 as against 2·46 in 1891. The following table shows the number of males and females engaged in the industry, together with the proportion thereof to the total population at the last two census periods:—

Year.	Persons engaged in Pastoral Pursuits.			Proportion of—		
	Males.	Females.	Total.	Males to Male population.	Females to Female population.	Males and Females to total population.
1891	27,212	334	27,546	4·49	·06	2·46
1901	31,312	595	31,907	4·42	·09	2·36

According to the returns furnished in 1905, it would appear that there were only 29,919 males engaged in pastoral pursuits at the close of that year.

DISEASES IN STOCK.

On the whole, stock in New South Wales are comparatively free from disease, sheep and horses being remarkably healthy. At the first sign of any serious outbreak of disease among stock in any district, the Government Veterinary Surgeon is despatched to the scene for the purpose of ascertaining the cause and nature of the disease, and to advise regarding the best treatment for its suppression. The chief diseases of sheep recorded during the last ten years are anthrax, foot-rot, fluke, worms, and the black disease. Scab has been unknown for many years. The mortality from anthrax was considerable until M. Pasteur's system of vaccination was introduced. The first operations were rather unsatisfactory, but in the following year they were quite successful. Between 1891 and 1893 about 90,000 sheep were treated each year, but such is the general belief in the efficacy of the treatment that 1,692,000 sheep were vaccinated during 1905.

In wet seasons there is generally a considerable mortality from foot-rot, while fluke appears in much the same circumstances. These diseases are far less prevalent than they were a few years ago, and scarcely affected the stock at all during 1905—in fact, there were no very serious losses from disease of any kind.

The diseases most prevalent amongst cattle are pleuro-pneumonia, Cumberland disease (anthrax), black-leg (symptomatic anthrax), tuberculosis, cancer, actinomycosis, red-water, and ophthalmia. Poisonous plants also contribute to the mortality in cattle. There is no record of the extent of losses through pleuro-pneumonia, but the disease is of a settled character, being reported from an average of 25 districts annually during the past ten years. In 1905 about 2·5 per cent. of the stock on 98 holdings were affected, the disease being usually traced to stock imported from Queensland. Inoculation has been practised as a preventive, with good results, and, where necessary, the stock were quarantined until the disease was stamped out.

The losses from tuberculosis are heavy, the average during the five years ended with 1893 being about 3,000, while during the next six years the average annual loss was over 50 per cent. higher, and numbered 4,600. There has been a marked improvement since then, although the losses are still severe, the average during each of the five years ended with 1904 being 3,850. Of other diseases, cancer and actinomycosis cause the most deaths, the average loss through these diseases being over 1,600 in each of the last five years, while during the same period Cumberland disease was responsible for 450 deaths annually, black-leg 1,130, ophthalmia 500, and red-water 70.

Very little disease amongst horses is known in New South Wales. During the past ten years anthrax has never been reported from more than two or three districts, and in some years has been practically unknown. Australian string-halt—considered to be due to intestinal parasites—is somewhat more common, while cases of mange, influenza, ringworm, and strangles also occur. At intervals, one or more of these diseases becomes epidemic to a certain extent. Glanders has been practically unknown for years, but cases of ophthalmia and blindness have been reported.

The legislation in connection with animals known or suspected to be suffering from tuberculosis, anthrax, actinomycosis, and cancer, is of a stringent character, as the Board of Health inspectors are empowered to seize any animal suffering from or showing symptoms of tuberculosis or other specified disease, and to institute proceedings. Meat condemned by the Court is destroyed, or so disposed of as to prevent its consumption as human food, and the owner, or the person in whose possession it is found exposed for sale, is liable to a penalty of £20 for each carcase or piece of meat condemned. In addition to the ordinary inspectors, there are several special officers—veterinary surgeons—appointed under the Board of Health, whose duty it is not only to inspect, but to give instructions and advice. In the metropolitan district assistance is also given by the municipal authorities, and similar arrangements have been made in other towns.

The dreaded tick which has infested the cattle herds of the northern districts of Queensland, South Australia, and West Australia, has long threatened the country near the Queensland border; and, despite the efforts made by the Stock Department to prevent its introduction, it made its appearance during 1906. The districts which are infested have been quarantined, and every endeavour is being made to prevent the pest from spreading, and to eventually stamp it out.

Every precaution is taken to prevent the introduction of disease from abroad, either by sea or land, and also, in the event of an outbreak in any particular district of the State, to prevent its communication to other districts. Stock imported from oversea countries are subjected to close inspection on arrival and removed to quarantine for a certain period, but stock from countries which are known to be infected with serious diseases are not admitted under any circumstances. In the event of a serious outbreak of disease in any country or State, however, introduction of stock from such country may be prohibited.

Under the provisions of the Pastures Protection Act of 1902, a Board of seven directors is elected by the stockowners in each district which may be proclaimed by the Governor. The Board is empowered to take the necessary steps for the suppression of any outbreak of disease, or for the destruction of noxious animals, and may levy on owners of ten or more head of large stock, or 100 or more head of sheep, an annual assessment not exceeding 4d. per head of large stock, and ⅔d. per head of sheep. The inspectors under the Board are charged with enforcing the observance of regulations for travelling stock, and are empowered to enter any run at any time for the purpose of inspecting sheep. The Act provides for the establishment of quarantine stations, both for local sheep which may be diseased and for imported sheep. Under the provisions of the Act sheep may only be introduced from an adjacent State at appointed crossing-places, and must be legibly branded with the initial letter of the State from which they were transferred.

The terms of quarantine for foreign stock are as follows:—For horses, 14 days; cattle, 40 days; sheep, from 30 to 60 days; camels, 90 days; buffaloes, goats, deer, and other ruminants, 60 days; swine, 60 days; and dogs, 6 months. Stock admitted from the other Australian provinces are not quarantined.

The number of animals quarantined during the last ten years was as follows:—

Year.	Horses.	Cattle.	Sheep.	Dogs.
1896	20	9	65	70
1897	13	2	136	60
1898	13	82	247	54
1899	23	1	129	56
1900	42	...	109	28
1901	19	21	127	35
1902	32	35	141	28
1903	43	10	27	59
1904	34	26	91	59
1905	51	34	22	40

If stock, on arrival, are found to be infected, the animals are in certain cases at once destroyed, and in others treated as the Chief Inspector may direct.

Further precautions for the protection of the health of the live stock of the State are taken under the Animals Infectious Diseases Act of 1888 (56 Vic. No. 17), which makes it illegal for persons, unless specially licensed by the Minister for Lands, to keep or propagate disease microbes, or to inoculate animals therewith.

NOXIOUS ANIMALS.

The only large carnivorous animal in Australia at all dangerous to stock is the dingo, or native dog; but animals which consume the pasturage, such as kangaroos, wallabies, hares, and rabbits, are deemed by the settlers equally noxious. The rabbits are the greatest pests; at one period over 100,000,000 acres were infested with them, and 25,280,000 were destroyed in one year, and their skins paid for by the Government.

Rabbits first found their way into this State from Victoria, where some were liberated about fifty years ago in the Geelong district. There presence first attracted serious attention in 1881, when complaints were heard in the south-west of this country of the damage being done by the rabbits, which multiplied so rapidly that in 1882 they were to be met with on most of the holdings having frontages to the Murray. Attempts made to cope with them under the Pastures and Stock Protection Act were ineffectual, and the "Rabbit Nuisance Act" was passed. This Act provided for the compulsory destruction of rabbits by the occupants of the land, who were to receive a subsidy from a fund raised by an annual tax upon stockowners, but the fund soon proved inadequate, and from the 1st May, 1883, to the 30th June, 1890, when the Act was repealed, it was supplemented by £503,786 from the Consolidated Revenue. The tax upon stockowners yielded £831,457, and landowners and occupiers are estimated to have contributed £207,864, so that the total cost during the above-mentioned period exceeded £1,543,000.

The Rabbit Act of 1890 (54 Vic. No. 29) repealed the 1883 Act and those provisions of the Pastures and Stock Protection Act (44 Vic. No. 11) relating to rabbits. It also provided for the proclamation from time to time of Land Districts as "infested," and for the encouragement of the erection of rabbit-proof fences. From the 1st July, 1890, to the 30th April, 1902, the State expenditure under this Act was £41,620, the greatest part of which has been devoted to the erection of rabbit-proof netting.

In order to prevent the spread of the pest, and also with a view of assisting in its destruction, fences have been erected by the Government of the State at numerous places. The longest of these runs along the western side of the railway line from Bourke, *via* Blayney and Murrumburrah, to Corowa, in the extreme south of the State, a distance of 612 miles, the Railway Commissioners undertaking the work of supervision. On the border between New South Wales and South Australia, there is a fence which extends from the Murray northwards, a distance of about 350 miles. On the Queensland border a rabbit-proof fence has been erected between Barringun and the river Darling, at Bourke, a distance of 84 miles; while another has been erected at the joint expense of the Governments of Queensland and New South Wales, from Mungindi to the Namoi River, a distance of about 115 miles. The total length of rabbit-proof fences erected by the State up to 31st December, 1905, is, approximately, 1,330 miles, at a cost of £69,808, and by private persons, 44,975 miles, at a cost of £2,400,241.

The chief means adopted for the destruction of the pest are poisoning and trapping; but it has long been recognised that these methods are inadequate to cope with the evil. In 1906, Dr. Danysz, an eminent French scientist, claimed to have discovered a disease which was fatal to rabbits and easily propagated amongst them, while proving harmless to other animals or to birds. A liberal offer was made by the pastoralists of the State for the introduction of the disease, and the consent of the Federal Government having been obtained, the doctor was granted the use of Broughton Island by the New South Wales Government for the purpose of conducting experiments with various animals and birds, under the supervision of a medical officer of the Health Department.

The rabbit has become by far the greatest animal pest to pastoralists, and although it has a commercial value both as a food and for the sake of its skin, the return furnished is but a poor compensation for its enormous inroads upon pasture. Particulars of the export trade in frozen rabbits and in rabbit skins are given elsewhere in this volume.

Under the provisions of the Pastures Protection Act of 1902, power is given to the Pastures Protection Boards to erect rabbit-proof fences on any land, to take measures to ensure the destruction within their districts of all noxious animals, and to pay as rewards for such destruction, by way of bonus, such sums as may be fixed by the Board from time to time.

WATER CONSERVATION AND PUBLIC WATERING PLACES.

The necessity of providing a constant water supply for domestic use and also for stock in the dry portions of the interior of the State induced the Government to devote certain funds to the purpose of sinking for water, and bringing to the surface such supplies as might be obtained from the underground sources which geologists stated to exist in the tertiary drifts and the cretaceous beds which extend under an immense portion of the area of New South Wales.

The question of the existence of underground water had long been a subject of earnest discussion, but doubts were set at rest in 1879 by the discovery on the Kallara run, at a depth of 140 feet, of an artesian supply of water, which, when tapped, rose 26 feet above the surface. The Government then undertook the work of searching for water, and since the year 1884 the sinking of artesian wells has proceeded in a scientific and systematic manner, under the direction of specially-trained officers.

The deepest bore completed is that at Dolgelly, on the road from Moree to Boggabilla, where boring has been carried to a depth of 4,086 feet; this well yields a supply of approximately 682,000 gallons per diem. The largest flow obtained from Government bores is from the Kenmare, on the road from Bourke to Hungerford; the depth of this well is 1,539 feet, and the estimated flow about 2,050,000 gallons per diem. The flowing bores sunk by the Government yield over 25,074,000 gallons of water per day, and in addition there are pumping bores which yield 500,000 gallons per day.

Watering places are established on all the main stock routes of the State, and consist of tanks, dams, wells, and artesian bores. At the present time there are 321 tanks and dams or reservoirs, 72 wells, and 65 artesian bores. The tanks have a capacity of up to 5,000,000 gallons, and in depth they range up to 20 feet. They are so constructed as to be fed during rainy weather by surface drains. The soil from the excavations is embanked around, in order to afford shelter from the wind and to lessen evaporation, and also, where the contour is favourable, to conserve water above the ground surface. Except at those dams and reservoirs which are of large extent and capacity, stock are not allowed direct access to the tanks, but are watered at troughs which are filled by means of service reservoirs, into which the supply is raised by various methods—steam, horse, or wind power. From the wells the water is mostly drawn by whims and self-acting buckets. In addition to this supply, the 65 Government artesian bores on the various stock routes of the State yield approximately 25,074,000 gallons.

Of the dams, tanks, wells, and bores in existence, 234 have been let on lease for various periods, at rentals ranging from £1 to £235, the total rental receivable by the State being about £6,479. After being advertised in the *Government Gazette* and the local newspapers, the leases are submitted to public tender, the condition being that the tenant must constantly either reside at the watering place himself or provide a resident caretaker. In either case he may take stock on agistment and depasture a certain number of his own on the lands appertaining to the lease, and he is also encouraged to cultivate and improve such lands. He is permitted to charge a fixed scale for watering stock, viz.: 1d. per head for horses, 1d. for cattle, 1d. for camels, ½d. for goats and pigs, and 1s. per 100 or portion of 100 sheep. Water may also be sold for domestic purposes at 6d. per 100 gallons. Twenty-eight public watering places have been placed under the authority of trustees or municipal councils, this course being permitted by the Act when expedient. In addition to the above, 121 dams and waterholes are open to the public without any fee.

The "Artesian Wells Act of 1897" provides that any occupier of land, or any group of occupiers, may petition the Minister to construct an artesian well, and the necessary distributing channels for water. The petitioners are required to consent to the transfer to the Crown of an area, not exceeding 40 acres, embracing the site for the bore, and to pay such charges as may be assessed by the Land Board, which shall not exceed the yearly value to each occupier of the direct benefit accruing to his land from the construction of the bore and the supply of water from the same; but such charges cannot exceed 6 per cent. per annum on the cost of the works. Provision is also made for the Minister to take the initiatory steps when a group of settlers are not in agreement. It is enacted that a two-thirds majority, occupying two-thirds of the area of the land to be dealt with, shall rule, and that the minority must come into the scheme and pay proportionately with the others.

Much has been done in the way of artesian boring by private enterprise. As far as can be ascertained, 270 private bores have been undertaken in New South Wales, of which 21 were failures, and 12 are in progress. Several of the bores have a flow of over 4,000,000 gallons per day, while the total daily flow is about 150,000,000 gallons.

The "Water and Drainage Act of 1902" authorises the expenditure of £200,000 annually for a period of five years on works of water supply, water conservation, irrigation, or drainage, and provides for the constitution of trusts in certain cases to administer the same. The majority of the trusts are situated in the northern portions of the State, and have been formed to deal with works that have been wholly or partially constructed under the Artesian Wells Act. The trustees make an assessment to cover maintenance, 4 per cent. interest and 2 per cent. sinking fund, to liquidate the capital cost of the work at the end of twenty-eight years. Under this Act five drainage proposals have been gazetted. while action has been taken to form trusts and gazette proposals in connection with twenty-two bores, which will ensure a return on the capital outlay, and do away with the waste of water, which has resulted for some years, from the absence of distributing works.

DAIRYING INDUSTRY.

Dairy Farming.

The dairying industry of New South Wales has made considerable advance during recent years, and is now a most important factor in the wealth and prosperity of the State. At an early period in the history of New South Wales dairying was carried on, the first dairy farm for the manufacture of butter being established on the Nepean River. Coming down to a more recent period, dairying as a profitable pursuit was pursued mainly on the South Coast, in the Shoalhaven and Illawarra districts. For many years its progress was slow, and it was not until the introduction of the creamery and factory system that any great development occurred. With the manufacture of butter by machinery and the perfection of the cold-storage system, the real business of dairying may be said to have begun. The first creamery and factory were established in the South Coast district, and for some years dairying was still practically confined to this district; but eventually it was firmly established in the North Coast, especially on the Clarence and Richmond Rivers, where the real home of the industry may now be found. It is on these rivers, and to a less extent on the Tweed, Macleay, Manning, Bellinger, Hastings, and the Lower Hunter, that the greatest expansion has taken place, the inducements offered by the north having led to the migration of many settlers from the southern districts. A glance at the following figures will show the great strides made by the North Coast district, and how rapidly it has outstripped the south in regard to production :—

Year.	Dairy Cows in Milk.	Butter made.	Cheese made.	Bacon and Hams cured.	Total yield of Milk.
			North Coast.		
	No.	lb.	lb.	lb.	gallons.
1897	120,855	9,822,059	62,288	1,087,333	....
1905	198,573	30,830,774	45,218	4,671,713	80,269,789
			South Coast.		
1897	137,643	15,008,881	3,630,633	4,044,063	....
1905	124,775	13,477,033	4,042,252	3,425,659	49,894,137

In this table the North Coast includes the North Coast, Hunter, and Manning districts, while the South Coast includes the county of Cumberland. It will be seen that in everything, with the exception of cheese-making, the north is far in advance of the south. With regard to the figures relating to butter, it should be borne in mind that a large proportion of the milk from the South Coast goes to furnish the supply of the metropolis. The quantity of milk used for each purpose in the two districts was :—

	North Coast.	South Coast.
Used on farms for making—	gallons.	gallons.
Butter	2,648,807	2,764,163
Cheese...	11,436	2,025,751
Separated, or sent to creamery or factory ...	72,325,791	31,721,150
Balance sold for other purposes........	5,283,755	13,383,073
	80,269,789	49,894,137

The quantity of milk used for making butter on farms was 2,648,807 and 2,764,163 gallons, respectively, in each district, while 72,325,791 and 31,721,150 gallons were sent to the creamery or factory. Of the latter quantity, 41,208 and 2,035,191 gallons were used for cheese, and 140,000 and 296,000 gallons for condensed milk, leaving 74,793,390 and 32,154,122 gallons used for making butter. Comparing these figures with the production of butter, it is found that, during 1905, 100 gallons in the north yielded 41·22 lb. of butter, and in the south 41·91; so that it would appear that the milk in the latter district contained a rather higher proportion of butter-fat.

Although dairying is mainly confined to the coastal regions, where grass is available for food throughout the year, it is also actively pursued in the more favoured parts of the non-coastal regions for the purpose of supplying local wants, and already in places remote from the metropolis well-equipped factories have been established. In these localities the industry is generally carried on in conjunction with wheat-farming and sheep-raising, and sufficient fodder must be grown to carry the cattle through the winter months.

Most of the native grasses of the State are particularly suitable for dairy cattle, as they possess milk-producing as well as fattening qualities, and these are supplemented in winter by fodder, such as maize, barley, oats, rye, lucerne, and the brown variety of sorghum or planter's friend. Ensilage is also used as food, but not so generally as it should be, and the quantity made varies considerably in each year. In the year ended 31st March, 1904, 21,393 tons were made; in 1905, 12,609 tons; and in 1906, only 9,321 tons. The area of land devoted to permanent artificially-sown grasses has been largely extended during the last few years, and in March, 1906, it amounted to about 606,000 acres. The produce of this land is principally used as food for dairy cattle, and as the area is still below the present requirements, an extension of this form of cultivation may be anticipated. The number of dairy cows in milk, and the area under artificially-sown grasses in each district of the State, were as follow:—

District.	Area under permanent artificially-sown grasses.	Dairy Cows in milk.
Coastal Division—	acres.	No.
North Coast	341,767	117,811
Hunter and Manning	36,004	80.762
County of Cumberland	5,785	21,475
South Coast	172,185	103,300
Total	555,741	323,348
Tableland Division—		
Northern Tableland	7,386	15,845
Central ,,	8,529	23,585
Southern ,,	4,100	23,030
Total	20,015	62,460
Western Slopes—		
North-western Slope	2,273	11,745
Central-western ,,	3,651	8,304
South-western ,,	7,376	18,318
Total	13,300	38,367
Western Plains and Riverina—		
North-western Plain	30	2,448
Central-western ,,	4,922	4,171
Riverina	12,287	9,889
Total	17,239	16,508
Western Division	5	2,267
Total, New South Wales	606,300	442,950

The number of dairy cows shows a considerable increase during the past eight years, although several of the seasons were most unfavourable. This will be apparent from a consideration of the following figures:—

Year.	No. of Dairy Cows in milk.
1897	409,098
1898	416,053
1899	399,327
1900	420,148
1901	417,835
1902	351,287
1903	362,429
1904	424,936
1905	442,950

Since 1902 there has been a remarkable increase in the number of cows, and, what is still more important, there has also been an increase in their average yield of milk. The total yield of milk, and the average per head of the cows in milk at the end of each of the last five years, was:—

Year.	Dairy Cows in milk.	Production of milk.	Average Yield per Cow.
	No.	gallons.	gallons.
1901	417,835	122,750,500	294
1902	351,287	105,742,900	301
1903	362,429	129,966,100	359
1904	424,936	158,650,800	373
1905	442,950	162,918,600	368

The average yield is prejudiced by the fact that it is based on the number of cows in milk at the end of the year, whereas the numbers may have varied considerably during any of the years. Moreover, it is plain that in a good season the cows will give a better daily yield, and over a longer period, than in a bad season. After allowing for these contingencies, however, it is evident that there has been a substantial increase in the average yield since the first year quoted. The figures for 1905 are not so high as in 1904, but the season was not so favourable in many parts of the State.

Almost as important as the average yield of milk is the percentage of butter-fat contained therein, and it is satisfactory to note that this also shows an improvement since 1902, the first year for which the proportion can be ascertained. In order to show the improvement in this respect, the following table has been prepared, showing the quantity of butter made and the milk used for that purpose during each of the last four years, and distinguishing between the milk treated on farms and in factories:—

Year.	On Farms.		In Factories.		Total.	
	Milk used.	Butter made.	Milk used.	Butter made.	Milk used.	Butter made.
	gallons.	lb.	gallons.	lb.	gallons.	lb.
1902	9,914,454	3,417,502	66,924,976	26,533,475	76,839,430	29,950,977
1903	11,859,529	4,094,150	87,189,710	34,632,957	99,049,239	38,727,107
1904	12,791,709	4,530,771	117,698,450	49,060,472	130,490,159	53,591,243
1905	13,460,534	4,576,076	116,723,796	48,464,174	130,364,330	53,040,250

Comparing the quantity of milk used with the butter produced, it is found that although the proportion of butter-fat decreased slightly during 1905, nevertheless 100 gallons of milk yielded 1·7 lb. of butter more than in 1902:—

Year.	Quantity of butter per 100 gallons of milk treated.		
	On Farms.	In Factories.	On Farms and in Factories.
	lb.	lb.	lb.
1902	34·5	39·6	39·0
1903	34·5	39·7	39·1
1904	35·4	41·7	41·1
1905	34·0	41·5	40·7

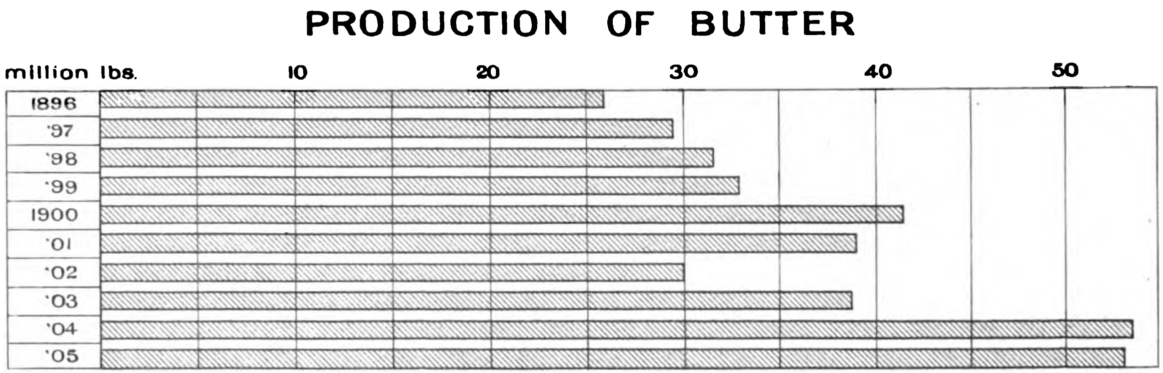
From these totals it would appear that the percentage of butter-fat has increased considerably since 1902, and as the increase is most noticeable in factory-made butter, it is only reasonable to suppose that a good deal of it is due to the improvements in machinery and in the methods of working.

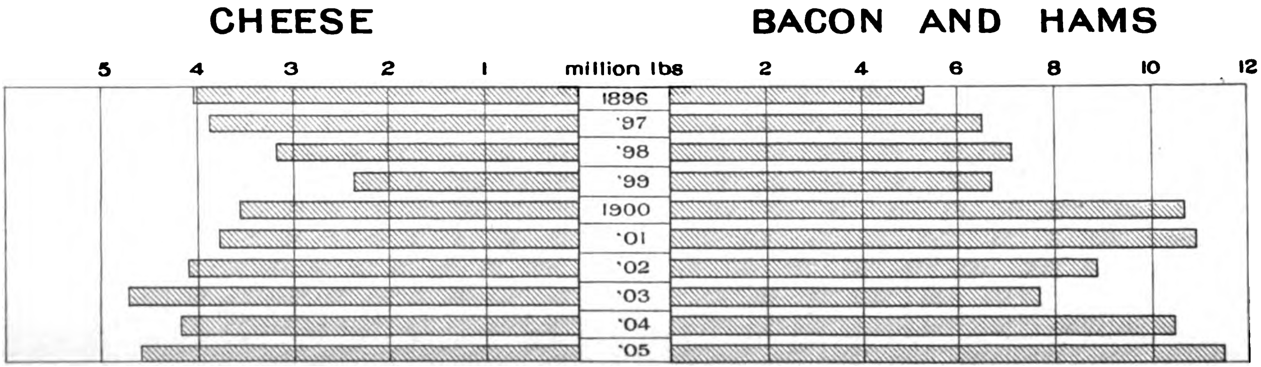
The increase, both in the yield of milk and in the proportion of butter-fat, is only what might have been expected in view of the greater care and attention which has been paid to breeding first-class dairy-cattle during recent years. In this respect the Government have rendered great assistance to the dairy-farmers by the importation of some high-class stud bulls from England, which may be used for a short period at a small fee. There are twenty-five of these animals distributed amongst the chief centres of the dairying industry.

As already stated, it was the manufacture of butter by machinery which made the dairying industry a really important one, and it is to the introduction of the factory system in convenient centres that it owes its present development. When the factory system was first introduced, the process of cream separation and butter making were carried on together. This arrangement was improved upon by the establishment of "creameries," where the cream was separated and then sent on to the factories. In the last few years, however, there has been another great change, and most of the farmers now separate the milk in their own dairies.

Most of the factories that deal with dairy produce are established on the co-operative principle, and during the past eleven years the total number has increased from 388 to 463, the hands employed from 1,032 to 1,380, and the value of the machinery from £211,462 to £277,908. During this period the quantity of butter made has increased from 23,295,512 lb. to 53,040,250 lb. The production in each district during 1905 is shown in the following table:—

District.	Butter made.	District.	Butter made.
Coastal Division—	lb.	Western Slopes Division—	lb.
North Coast	20,122,019	North-western Slope ...	926,208
Hunter and Manning......	10,708,755	Central-western ,, ...	532,292
County of Cumberland...	1,303,285	South-western ,, ..	1,555,142
South Coast..............	12,173,748	Total	3,013,642
Total..............	44,307,807	Western Plains & Riverina—	
		North-western Plain ...	34,985
Tableland Division—		Central-western ,, ..	132,117
Northern Tableland	1,061,421	Riverina..................	437,654
Central ,, ...	2,097,576	Total..............	604,756
Southern ,, ...	1,916,583	Western Division..............	38,465
Total..............	5,075,580	Total, New South Wales	53,040,250





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Prior to 1890 the State was under the necessity of importing a considerable quantity of butter to meet local requirements, but from that year an export trade was commenced, the surplus increasing from 281,341 lb. in 1890, to 20,513,300 lb. in 1904. The following table shows the production in factories and on farms, the excess of exports over imports, and the total consumption of butter in New South Wales during each of the last ten years:—

Year.	Butter made— In Factories.	On Farms.	Total.	Excess of Exports over Imports.	Apparent consumption of Butter.
	lb.	lb.	lb.	lb.	lb.
1896	18,828,293	7,045,984	25,874,277	592,962	25,281,315
1897	23,713,509	5,696,457	29,409,966	3,771,474	25,638,492
1898	26,522,467	4,961,134	31,483,601	7,759,421	23,724,180
1899	28,817,747	4,216,134	33,033,881	4,549,722	28,484,159
1900	37,056,317	4,423,477	41,479,794	8,487,534	32,992,260
1901	34,282,214	4,774,664	39,056,878	8,643,071	30,413,807
1902	26,533,475	3,417,502	29,950,977	*1,779,583	31,730,560
1903	34,632,957	4,094,150	38,727,107	7,625,069	31,102,038
1904	49,060,472	4,530,771	53,591,243	20,513,307	33,077,936
1905	48,464,174	4,576,076	53,040,250	13,841,514	39,198,736

* Excess of imports.

The proportion of factory-made butter has increased from 73 to 91 per cent. during this period; and this is not surprising, for not only is less milk required to produce a certain quantity of butter, but the price is also from ½d. to 1d. per lb. higher than for butter made on farms.

The export trade has grown rapidly, and is carried on almost entirely with the United Kingdom, whose immense population presents an enormous market for all products of the dairying industry. The imports of butter into the United Kingdom during the last six years are shown hereunder:—

Year.	Imports of Butter from— New South Wales.	Other Australian States and New Zealand.	Other Countries.	Total.	Proportion of Imports from— New South Wales.	Other Australian States and New Zealand.	Other Countries.
	cwt.	cwt.	cwt.	cwt.	per cent.	per cent.	per cent.
1900	81,436	435,592	2,861,488	3,378,516	2·41	12·89	84·70
1901	59,597	355,914	3,287,379	3,702,890	1·61	9·61	88·78
1902	17,621	220,769	3,736,543	3,974,933	·44	5·56	94·00
1903	20,371	350,673	3,689,650	4,060,694	·50	8·64	90·86
1904	159,622	616,138	3,465,245	4,241,005	3·76	14·53	81·71
1905	168,531	591,220	3,388,115	4,147,866	4·06	14·26	81·68

It is only during the last fourteen years that Australian butter has seriously influenced the London market, for although small consignments had been sent previously to London, the huge import into that city from Denmark and Sweden practically controlled the price of the Australian article. The position is now, however, changed, for in 1905 Australian butter represented over 18 per cent. of the total imports, nearly one-third of all the butter imported into London during the winter months being of Australian origin, and on many occasions Australian creamery butter has commanded a higher value than Danish. The prices per cwt. for New

South Wales butter in London during the last four seasons were as shown below:—

Month during which Sales were effected in London.	1902-1903.		1903-1904.		1904-1905.		1905-1906.	
	Top.	Bottom.	Top.	Bottom.	Top.	Bottom.	Top.	Bottom.
	1902.		1903.		1904.		1905.	
	s.	s.	s.	s.	s.	s.	s.	s.
August	...	...	...	...	...	...	108	104
September	...	...	...	...	97	86	110	104
October	...	...	100	90	97	90	114	106
November	...	...	102	90	102	91	113	108
December	110	104	100	86	104	92	115	110
	1903.		1904.		1905.		1906.	
January	100	86	96	87	102	94	116	108
February	99	88	96	89	102	96	106	101
March	...	...	97	89	105	100	104	94
April	...	...	90	82	103	95	95	90
May	...	...	85	79	94	87	97	95
June	...	...	86	75	95	87	97	94
July	...	...	...	...	100	96	103	94

In those months for which quotations do not appear, it is most probable that no New South Wales butter was on the market. The experience of the export trade goes to show that butter should be made expressly for this purpose, and while being of the best quality, should be salted and coloured to suit the taste of the particular market for which it is intended. So long as the present standard is maintained, there appears little doubt that the product of the State will continue in its present demand. There is no reason, however, why further improvement should not be made, and this can be effected by greater attention to detail. It may not be out of place to repeat what the State Government Dairy Expert has to say on the matter in a recent publication:—

"The following rules should be adhered to as nearly as possible by those whose duty it is to attend to the proper ripening of cream—(1) Allow the cream to pass over a cooler as it leaves the separator; (2) deliver this cream to the butter-maker as soon as possible; (3) the butter-maker should reduce the temperature of the cream to a favourable ripening one as soon as possible; and (4) should control the ripening so that the cream will be ready to churn in about twenty-four hours from the time of separation; (5) the cream should be churned when it contains between ·6 and ·7 per cent. of lactic acid; (6) the temperature of churning should be about 52° Fahr. in summer, and 56° Fahr. in winter."

The actual process of manufacture should, of course, receive the greatest consideration in the factory; but the most suitable form of box, the method of packing, and the quality of the parchment-paper used, are all matters of importance. An important advance has been made in the direct shipment from the factories to specially appointed agents in London or other centres.

In earlier years the difficulty in securing ocean freights during the export season constituted a severe drawback, but now that the trade has assumed such important dimensions it is the subject of keen competition among shipping companies, and there is no lack of facilities in this respect, while the charges have been greatly reduced.

The freight on butter forwarded by mail steamers from Sydney to London during the seasons 1900-1 to 1904-5, was 3s. 6d. per box of 56 lb., while other steamers accepted shipments at rates varying from $\frac{3}{16}$d. to $\frac{3}{8}$d. per lb. For the season 1905-6 mail steamers contracted to accept 1s. 10d. per box, while other steamers charged $\frac{3}{8}$d. per lb., or 1s. 9d. per box, and this agreement holds good for the ensuing season.

Although the manufacture of butter has increased so rapidly, there has not been a similar increase in the quantity of cheese made, which in 1905 was only 15 per cent. more than in 1896, while the production of butter increased by 105 per cent. It is true that the demand for cheese is much more limited, but as the production does not at present meet the requirements of the local market, it is evident that the manufacture of butter has been found to be more profitable. It is certain that the manufacture of cheese will never command the same attention as butter, owing to its great disadvantages as an article of export. Cheese matures quickly, and, unlike butter, cannot be frozen; and it decreases in value unless sold just at the right time. Moreover, it has only half the money value of butter, while the cost of freight is practically the same; so that it is not surprising that even where cheese can be produced in New South Wales under excellent conditions its manufacture is not being greatly extended.

The following table shows the manufacture of cheese in districts:—

District.	Cheese.
Coastal Division :—	lb.
North Coast	37,413
Hunter and Manning	7,805
County of Cumberland	6,333
South Coast	4,035,919
Total	4,087,470
Tableland Division :—	
Northern Tableland	125,495
Central Tableland	209,166
Southern Tableland	42,139
Total	376,800
Western Slopes Division :—	
North-western Slope	43,655
Central-western Slope	....
South-western Slope	116,135
Total	159,790
Western Plains and Riverina Division	1,860
Western Division	60
Total, New South Wales	4,625,980

It will be seen that cheese-making is practically confined to the South Coast; in fact, the quantity made in other parts of the State is becoming smaller each year. As an instance, it may be mentioned that in the North Coast and Hunter Districts, where 105,000 lb. of cheese were made in 1895, there were only 45,218 lb. made in 1905.

While fully recognising that the manufacture of cheese for export has many disadvantages as compared with butter, it is evident that these apply in a greater or less degree to other countries, and it is, therefore, somewhat surprising to find there is still a large import of cheese.

The following table shows, for each year of the last decennial period, the local production and the total consumption of cheese:—

Year.	Production of Cheese.			Excess of Imports over Exports.	Apparent Consumption of Cheese.
	In Factories.	On Farms.	Total.		
	lb.	lb.	lb.	lb.	lb.
1896	1,887,106	2,132,738	4,019,844	949,706	4,969,550
1897	2,221,377	1,715,791	3,937,168	187,339	4,124,507
1898	2,220,445	1,024,867	3,245,312	1,670,525	4,915,837
1899	1,376,895	1,009,092	2,385,987	2,454,260	4,840,247
1900	2,322,663	1,236,160	3,558,823	1,503,526	5,062,349
1901	2,428,599	1,410,236	3,838,835	1,771,247	5,610,082
1902	2,691,439	1,456,599	4,148,038	873,627	5,021,665
1903	3,340,510	1,407,666	4,748,176	811,745	5,559,921
1904	2,677,830	1,545,791	4,223,621	496,595	4,720,216
1905	2,997,982	1,627,998	4,625,980	414,972	5,040,952

In addition to butter and cheese there are other milk products which might receive more attention than they command at present. The manufacture of condensed milk is a matter which comes under this heading, for the annual import during the last six years has averaged 5,044,000 lb., with a value of nearly £90,500. At present there are two factories in the State, situated at Bomaderry, near Nowra, and at Pitt Town. A somewhat similar product, known as concentrated milk is being manufactured at Belford, near Singleton. This article will keep for months in cool chambers, and is principally used on ocean-going steamers. Being without sugar, it has all the richness and flavour of fresh milk, and in this respect is more useful than condensed milk, which is not palatable to many people. The total quantity of milk used in the manufacture of the two products in 1905 was 341,738 gallons, and the output of the articles aggregated 1,169,977 lb.

SWINE.

The breeding of swine, which is usually carried on in conjunction with dairy-farming, has been very much neglected in New South Wales, for although the number at the end of 1904 was the highest yet reached, it does not show any great increase on that of 1880, as the following figures prove:—

Year.	Swine.	Year.	Swine.	Year.	Swine.
	No.		No.		No.
1860	180,662	1886	209,576	1896	214,581
1865	146,901	1887	264,111	1897	207,738
1870	243,066	1888	248,583	1898	247,061
1875	199,950	1889	238,585	1899	239,973
1880	308,205	1890	283,061	1900	256,577
1881	213,916	1891	253,189	1901	265,730
1882	154,815	1892	249,522	1902	193,097
1883	189,050	1893	240,860	1903	221,592
1884	211,656	1894	273,359	1904	330,666
1885	208,697	1895	223,597	1905	310,702

Considering the importance which the industry has attained in other countries, it is a matter for surprise that more attention has not been paid to it in this State, where the conditions of farming in many parts, and more especially in the coast districts, offer great facilities for the raising of this class of stock.

The breeding of swine is an important factor in successful dairy-farming, but the increase in the number of stock has not kept pace with the increase in the quantity of milk available for food. A farmer who possesses his own cream separator can utilise the separated milk for the purpose of feeding pigs, and those who sell their milk to a creamery may sometimes obtain separated milk without cost, and in any case it can be purchased at about a farthing per gallon, a price which renders it a most profitable food for pigs, provided that such crops as maize, rye, peas, mangolds, pumpkins, &c., are grown to supplement the milk diet. Under these circumstances, and considering the fact that it is no uncommon thing for good baconers to bring over £3 in the open market, the breeding of a good class of pig must be a profitable pursuit. Until recent years there was some difficulty in obtaining suitable pigs for breeding purposes, but as stock from the best imported strains may now be purchased at the Government Experimental Farms and other Institutions, this difficulty has been overcome. The breeds generally met with in the State are the improved Berkshire, Poland, China, and Yorkshire strains.

The following statement shows the number of pigs in each district at the end of 1905, and the quantity of bacon and ham made:—

District.	Swine.	Bacon and Ham made.
Coastal Division—	No.	lb.
North Coast	61,871	3,887,742
Hunter and Manning	50,681	783,971
County Cumberland	19,342	2,674,868
South Coast	37,432	750,791
Total	169,326	8,097,372
Tableland Division—		
Northern Tableland	15,066	511,632
Central Tableland	22,717	647,908
Southern Tableland	12,015	499,713
Total	49,798	1,659,253
Western Slopes Division—		
North-western Slope	19,897	334,180
Central-western Slope	14,744	242,740
South-western Slope	20,054	559,865
Total	54,695	1,136,785
Western Plains and Riverina Division—		
North-western Plains	3,869	17,526
Central-western Plains	10,680	235,222
Riverina	17,636	480,585
Total	32,185	733,333
Western Division	4,698	25,697
Total, New South Wales	310,702	11,652,440

There is no reason why the production of bacon and hams should not be very largely increased, as, except in very rare instances, it has not been sufficient to meet local requirements.

The production has varied with the seasons, but the general tendency is towards an increase, as may be seen from the following table, which also shows the apparent consumption for a period of ten years:—

Year.	Production and Consumption of Bacon and Hams.				
	Factory.	Farm.	Total Production.	Excess of Imports over Exports.	Apparent Consumption.
	lb.	lb.	lb.	lb.	lb.
1896	2,902,987	2,400,776	5,303,763	816,165	6,119,928
1897	4,458,063	2,086,718	6,544,781	578,877	7,123,658
1898	4,836,899	2,347,159	7,184,058	*220,536	6,963,522
1899	4,452,112	2,379,831	6,831,943	291,145	7,123,088
1900	7,963,670	2,899,455	10,863,125	1,030,889	11,894,014
1901	7,392,060	3,688,831	11,080,891	1,188,843	12,269,734
1902	6,143,030	2,852,826	8,995,856	1,719,451	10,715,307
1903	5,664,492	2,200,279	7,864,771	820,006	8,684,777
1904	7,343,220	3,337,312	10,680,532	919,974	11,600,506
1905	6,931,217	4,721,223	11,652,440	2,692,758	14,345,198

* Excess of Exports.

As with butter and cheese, the production of bacon and ham is principally confined to the coast districts, but the breeding of pigs is more evenly distributed throughout the State.

Upon examination of the figures showing the apparent consumption, it will be seen that the local demand for bacon and hams is increasing both absolutely and proportionately to population, and, although the production is now considerably greater than it was prior to 1900, the import figures for the year 1905 are the largest in the decade.

At present there are few factories devoted entirely to the curing of bacon and hams, and more bacon factories fitted with refrigerating machinery are required, so that curing may be continued during the summer months. In these central establishments, moreover, greater care could be exercised both in securing uniformity in the quality of the article and in cutting. For export the animals should be grown larger, as English bacon pigs run to 300 or 400 lb. weight each. The majority of the pigs bred in the State are usually sold when fat as porkers at from 60 lb. to 90 lb. weight, the majority being sent to the Sydney market alive. The price ruling for good porkers during 1906 ranged from 23s. 6d. to 28s. 6d., the average being about 26s. Owing to the neglect to grow root crops for the purpose of feeding pigs during the winter, when milk is scarce, the demand for store pigs at the commencement of the summer is usually very great, while there is a corresponding glut of fat pigs at low prices as winter approaches.

The number of swine slaughtered during 1905 was 289,096, of which 116,581 were killed in the metropolis.

Value of Production.

The value of the production from the dairying industry during 1905 was £2,799,000, to which may be added £324,000 obtained from the sale of swine, making a total of £3,123,000. The value from each product was as follows:—

	£
Butter	2,289,000
Cheese	102,000
Milk (not used for butter or cheese)	408,000
Swine	324,000
	£3,123,000

The value in 1894, exclusive of swine, was £1,876,000; so that during the eleven years there was an increase equal to nearly 50 per cent.

MINOR INDUSTRIES.

Poultry-farming.

Poultry-farming, as an adjunct to the dairying industry, has been carried on for many years, but it is only within a comparatively recent period that it has developed into a distinct and flourishing industry on its own footing. In the neighbourhood of the metropolis, as well as in other portions of the State, may now be found large poultry-farms, laid out in the most approved style, and fitted with the latest inventions for the hatching and fostering of young stock. The greatest attention is paid to the breeding of the birds, both with regard to their egg-producing capacity, and also to their value for table purposes. As no information as to the number of poultry is available, it is not possible to give more than a general estimate of the production, the value in 1905 being computed at £899,000.

Bee-keeping.

Although there are but few persons in the State who devote their time solely to the bee-keeping industry, the number of hives and the annual production are gradually increasing. The production of honey and beeswax shows great variation during the past ten years, as will be apparent from the following table:—

Year ended 31st March—	Bee Hives.		Honey.	Average Yield of Honey per Hive.	Beeswax.
	Productive.	Un-productive.			
	No.	No.	lb.	lb.	lb.
1897	32,557	9,343	1,378,039	42·3	31,842
1898	38,017	15,174	1,876,719	49·4	48,747
1899	51,681	7,604	2,974,830	57·6	52,904
1900	48,997	9,813	2,795,141	57·0	55,988
1901	47,394	11,560	2,397,698	50·6	49,337
1902	42,174	10,915	2,259,177	53·6	51,735
1903	37,980	8,263	1,815,480	47·8	37,207
1904	45,094	13,236	2,147,295	47·6	49,589
1905	53,043	11,687	3,023,468	57·0	58,610
1906	36,589	12,043	1,841,236	50·3	39,620

The greater part of the production is from the coastal districts, which contributed more than half of the total during 1905, the production for each division being as follows:—

Division.	Honey.	Beeswax.
	lb.	lb.
Coastal Division	1,014,713	22,690
Tableland Division	447,987	11,328
Western Slopes Division	261,782	4,364
Western Plains and Riverina Division.	110,840	1,027
Western Division	5,914	211
Total	1,841,236	39,620

There is still a considerable quantity of honey imported into the State, the average annual import being about 200,000 lb. The estimated value of the production of honey and beeswax in 1905 was £22,000.

RABBITS AND HARES.

The growth of the export trade in frozen rabbits and in rabbit skins is a noticeable development of recent years, but the return thus brought to the State is by no means commensurate with the financial losses caused by the depredations of the pest.

Year.	Value of Domestic Exports.		
	Frozen Rabbits and Hares.	Rabbit Skins.	Frozen Rabbits and Rabbit Skins.
	£	£	£
1900	4,537	4,182	8,719
1901	6,233	13,291	19,524
1902	12,143	38,094	50,237
1903	37,653	38,233	75,886
1904	56,007	105,952	161,959
1905	145,268	162,783	308,051

The export trade, which is principally with the United Kingdom, amounted to £308,051 in 1905; but these figures by no means represent the total return from rabbits. In the State itself, these animals now form a common article of diet, both in the metropolis and country, especially during the winter months, when large numbers of men are engaged in their capture and distribution. The skins are also largely used in the manufacture of felt hats.

THE MANUFACTURING INDUSTRY.

Compared with the scale on which manufactories are established in the older countries of the world, those of New South Wales appear very small; but this is not surprising when the sparseness of the population throughout a large portion of the State is taken into consideration. Still, although New South Wales cannot yet be considered an important manufacturing country, this source of national wealth has by no means been neglected, for the invested capital now amounts to over £20,000,000, and the annual value of production exceeds £10,500,000.

So early as 1860 it is recorded that there were 567 manufactories and works in the State, and in 1870 the number had increased to 1,692. For the year 1877 more detailed information is available, and it appears that the manufactories then numbered 2,602, and gave employment to 24,932 persons. At this period the chief works consisted of clothing and boot factories, grain and sugar mills, and coach and waggon factories. In clothing factories 2,710 hands were employed; in boot factories, 1,915; in grain mills, 623; in sugar mills, 1,065; and in coach and waggon factories, 1,049.

The progress since the year 1877 may be seen from the following figures:—

Year.	Establishments.	Hands employed.	Year.	Establishments.	Hands employed.
	No.	No.		No.	No.
1877	2,602	24,932	1892	2,657	47,916
1878	2,723	25,991	1893	2,428	42,057
1879	2,654	25,684	1894	3,070	46,502
1880	2,779	28,259	1895	2,723	48,030
1881	2,961	31,191	1896	2,928	49,840
1882	3,158	33,889	1897	2,826	51,439
1883	3,224	34,734	1898	2,839	52,518
1884	3,419	38,794	1899	2,912	55,646
1885	3,541	41,677	1900	3,077	60,779
1886	3,541	43,527	1901	3,367	66,230
1887	3,349	43,051	1902	3,396	66,269
1888	3,106	45,564	1903	3,476	65,633
1889	2,926	44,989	1904	3,632	68,036
1890	2,583	46,135	1905	3,700	72,175
1891	3,056	50,879			

Prior to 1901 there was no Act in force in the State making it imperative for proprietors of factories and works to supply an annual return of their operations. The Census Act of 1901, however, conferred extensive powers on the Statistician with respect to information regarding these establishments, and, in consequence, the industrial statistics since that year have been on a far more comprehensive basis. At the present time particulars of the operations of factories and works are seldom withheld, and when they are not given, an approximate return is furnished by the collector, who usually posesses a special knowledge of the district.

It should be mentioned that establishments where no machinery is used are excluded from consideration unless at least four persons are engaged therein. Prior to 1896 the minimum in such cases was five hands; but a change was made to secure uniformity with Victoria, and having been agreed to by the Statisticians of the various States, all information regarding manufactories throughout the Commonwealth is now compiled on the same basis. All works and factories in which machinery is used are included, as it is obvious that an establishment where only two or three hands are employed to look after machinery may turn out a greater quantity of work than another in which the services of a much larger number of hands, unassisted by mechanical power, are utilised.

The figures for the years intervening between 1891 and 1896 have been altered to agree with the amended classification, so that a comparison might be made with those of subsequent years. The following table shows the progress since 1891, both in regard to hands employed and machinery used:—

Year.	Number of Establishments.	Hands employed.			Power of Engines.		Value of Machinery and Plant.
		Males.	Females.	Total.	Full Capacity.	Average Used.	
					h.-p.	h.-p.	£
1891	3,056	43,203	7,676	50,879	38,618	29,801	4,386,475
1892	2,657	42,909	5,007	47,916	36,364	28,061	4,246,129
1893	2,428	37,832	4,225	42,057	35,203	27,162	4,425,083
1894	3,070	41,070	5,432	46,502	38,033	29,197	5,529,866
1895	2,723	41,546	6,484	48,030	42,849	31,077	5,255,129
1896	2,928	42,908	6,932	49,840	44,839	33,253	5,035,905
1897	2,826	44,333	7,106	51,439	46,347	34,191	5,294,228
1898	2,839	44,673	7,845	52,518	44,241	32,968	5,435,696
1899	2,912	47,063	8,583	55,646	45,938	33,080	5,640,384
1900	3,077	50,516	10,263	60,779	49,599	35,828	5,707,640
1901	3,367	54,556	11,674	66,230	63,405	44,595	5,860,725
1902	3,396	54,326	11,943	66,269	75,907	52,813	6,795,843
1903	3,476	52,453	13,180	65,633	81,475	59,353	7,009,806
1904	3,632	53,457	14,579	68,036	86,878	62,407	7,536,903
1905	3,700	56,111	16,064	72,175	90,896	70,054	7,919,948

During the two years preceding 1893 the manufacturing industry declined; but after the financial crisis in that year there was an almost immediate recovery, and each succeeding year, with one exception, has seen an increase in the number of hands employed. There has, moreover, been a great increase in the power of machinery used, and also in its value.

Taking the figures for 1896, which are the first compiled on the basis now existing, it will be seen that there has been an increase of 13,203 males and 9,132 females, making a total of 22,335 hands. The proportionate increase in the number of females has been much greater than in the case of males, for in several years the latter showed a decrease. From 1893 to the end of 1901, the number of males steadily increased; but during the next two years there was a temporary decrease, chiefly in the hands employed in metal works, establishments dealing with pastoral products, and refrigerating works.

EMPLOYMENT OF FEMALES.

The great increase in the number of females employed is a striking feature of the table just given, and when viewed as a proportion of the total number of hands, the result is still more marked. Taking the figures for 1896, it is found that the females represented only 13·9 per cent. of the total hands, while in 1901 the proportion had increased to 17·6 per cent., and in 1905 to 22·3 per cent. Stated in another way, it may be said that to every hundred males employed in 1896 there were 16 females; in 1901, 21 females; and in 1905, 29 females. In order to indicate clearly the extent to which female labour is availed of, and the direction in which it is chiefly applied, the following table has been prepared, showing the numbers engaged in each of the principal branches of the manufacturing industry during the three years already referred to, and the proportion to every hundred males employed :—

Manufactory or Work.	Females employed.			No. of Females to 100 Males.		
	1896.	1901.	1905.	1896.	1901.	1905.
	No.	No.	No.	No.	No.	No.
Aërated Waters	34	40	33	4	4	3
Biscuits	136	350	436	44	71	83
Boots and Shoes	849	1,118	1,444	32	39	48
Chemicals, Drugs, &c.	32	66	172	17	20	41
Clothing (Slop)	1,290	2,636	3,392	322	434	446
Clothing (Tailoring)	1,036	1,437	1,649	107	100	119
Clothing (Oilskin & Waterproof)	94	290	172	157	258	420
Clothing (Shirts, &c.)	56	337	863	509	1,021	1,182
Condiments, Coffee, and Spices	172	167	208	43	56	69
Confectionery	118	225	320	33	39	52
Corn Flour, Oatmeal, &c.	16	71	131	38	46	63
Dressmaking and Millinery	1,738	2,526	3,612	4,138	4,141	6,689
Furniture, Bedding, &c.	49	128	113	5	7	7
Hats and Caps	50	198	586	217	150	184
Jam and Fruit Canning	81	140	167	22	28	31
Printing and Bookbinding	394	703	826	9	16	18
Paper Bags and Boxes	134	140	373	343	149	140
Papermaking	16	8	66	25	19	69
Sails, Tents, and Tarpaulins	15	86	103	27	88	12
Tobacco	170	428	390	36	71	69
Woollen and Tweed Mills	70	72	111	43	44	74
Other Industries	382	499	897	1	1	2
Total	6,932	11,674	16,064	16	21	29

In 1905 there were, therefore, 9,132 more females employed than in 1896, and the proportion of females to every hundred males employed had risen from 16 to 29. The figures last quoted do not, however, take into account the variations in the proportionate number of males and females in the population, so the following table has been prepared, showing the number of females employed in factories, the total number of females aged 15 years and over, from whom the factory workers are chiefly drawn, and the proportion of the former per 1,000 of the latter:—

Year.	Total number of Females over 15 years of age.	Number of Females employed in factories.	Number of Females employed in factories per 1,000 females over 15 years.	Proportionate increase, per cent. In number of Females over 15 years of age	Proportionate increase, per cent. In number of Females employed in factories.
1896	360,500	6,932	19	......	......
1901	408,100	11,674	29	13·20	68·41
1905	439,620	16,064	37	7·72	37·60

Comparing the number of females engaged in factories with the total number of females over 15 years of age, it will be seen that the proportion has risen from 19 per 1,000 in 1896 to 37 per 1,000 in 1905. The number employed in factories during 1901 represented an increase of 68·41 per cent. on the number for 1896; but in the total number of females over 15 the increase was only 13·20 per cent., and in the period from 1901 to 1905 the respective increases were equal to 37·60 and 7·72 per cent. The number of females employed in factories has, therefore, grown about five times as fast as the general female population. Although the greater portion of the numerical increase has occurred in those industries which essentially belong to woman's sphere, there has also been a considerable increase in other industries; so that there is evidently an increasing tendency on the part of the manufacturers towards the introduction of female labour for the performance of minor duties in the work of manufacture, and in connection with the sorting, packing, and labelling of finished articles. Amongst the industries enumerated on the preceding page it will be seen that in nearly every instance the number of females employed to 100 males is increasing, noticeably in the biscuit, condiment, confectionery, and tobacco factories.

In the clothing industries, which include the manufacture of slop and waterproof clothing, tailoring, shirt and hat making, and dressmaking and millinery, the number of females employed in 1896 was 4,264, and 10,274 in 1905, an increase of 6,010 hands, equal to 141 per cent. In other industries, the numbers in each year were 2,668 and 5,790 respectively, an increase during the period of 3,122, or 117 per cent.

It may be of interest to mention the duties which are usually assigned to females in the various industries. In confectionery and biscuit factories, their chief employment is in packing or wrapping, usually on piece-work in the latter industry; in hat-making they are engaged chiefly as machinists or trimmers in straw-hat making; in boot and shoe factories as fitters, machinists, and tiers-off; in printing and bookbinding as folders and sewers; and in cigarette factories as holder-makers or machinists, or, on piece-work, as packers.

CHILD LABOUR.

Child labour is not employed in the factories of the State to any great extent, although it is gradually increasing. The law regulating primary education provides that children must attend school until they reach their fourteenth year, with the exception of those who, prior to reaching that age, have obtained exemption certificates; while section 35 of the Shops and Factories Act of 1896 provides that "No child shall, unless by special permission of the Minister, be employed in any factory; and no such special permission shall be given to a child under the age of 13 years." For the purposes of this Act, any person under 14 years of age is considered to be a child; and the children who received permits in 1905 numbered 288, of whom 186 were boys and 102 girls.

At the Census of 1901 it was ascertained that there were 2,127 males and 696 females under the age of 15 employed in manufactories. According to the returns furnished to the Statistician in 1905, there were only 668 males and 473 females under 15 engaged in factories. The Census figures include returns from establishments which do not come under the heading of manufactories as defined in these pages; but these would not be sufficient to account for the difference, and it is evident, therefore, that there must be a great reluctance on the part of apprentices and improvers to state their correct ages. Useful information in this connection is collected under the provisions of the Factories and Shops Act, which will tend to show the trend of the movement regarding the employment of child labour. Taking the factories in the metropolitan district, the following are the figures for the last nine years:—

Year.	Factories under Factories and Shops Act.					
	Employees under 16.		Total Hands.		Proportion of Hands under 16.	
	Males.	Females.	Males.	Females.	Males.	Females.
					per cent.	per cent.
1897	1,143	586	22,586	7,009	5·06	8·36
1898	1,062	525	23,786	7,831	4·46	6·70
1899	1,224	613	25,631	8,604	4·78	7·12
1900	1,342	788	29,086	10,018	4·61	7·87
1901	1,545	965	31,247	11,026	4·94	8·75
1902	1,603	1,277	31,433	12,397	5·10	10·30
1903	1,560	1,352	30,539	13,464	5·11	10·04
1904	1,634	1,572	30,888	14,777	5·29	10·64
1905	1,793	1,499	33,437	15,747	5·36	9·46

From these figures it would appear that while the employment of boys remains relatively about the same, the proportion of girls has steadily increased, and about one-tenth of the females now employed are under 16 years of age.

METROPOLITAN AND COUNTRY MANUFACTORIES.

The number of manufactories in the State at the end of 1905 was 3,700, and the number of hands employed 72,175, or an average of nearly 20 per establishment. There were 122 establishments which each employed over 100 persons, the average number therein being 210. In the following table will be found a division of the manufactories in the metropolitan and country districts, according to the number of hands employed during 1905:—

Establishments employing—	Metropolitan District.		Country Districts.		New South Wales.	
	Establishments.	Hands.	Establishments.	Hands.	Establishments.	Hands.
Under 4 hands	121	270	457	1,077	578	1,347
4 hands	125	500	266	1,064	391	1,564
5 to 10 hands	533	3,865	819	5,596	1,352	9,461
11 to 20 ,,	361	5,304	302	4,350	663	9,654
21 to 50 ,,	319	9,964	118	3,550	437	13,514
51 to 100 ,,	127	8,800	30	2,193	157	10,993
101 and upwards	94	20,139	28	5,503	122	25,642
Total	1,680	48,842	2,020	23,333	3,700	72,175

The chief seat of the manufacturing industry is, of course, to be found where population is densest; and it is, therefore, not surprising to find that the factories of the metropolitan district, although not so numerous, are much more important than those of the country, and provide employment for more than twice the number of hands. The average number of hands per establishment in the metropolitan district was 29, and in the country between 11 and 12.

The disparity between the metropolitan and country districts was not always so marked—in 1896 the hands numbered 29,085 and 20,755 respectively—and the inevitable conclusion is that the chief development of the manufacturing industry within recent years has taken place in the metropolitan district.

The facilities for the establishment of large industries in and around Sydney are considerable—a commanding position as regards communication with the outside world, proximity to the coal-fields, easy communication by rail or sea with the chief seats of raw production in the State, density of population, and abundant water supply—these have tended to centre in the metropolitan district all the chief industries. In the country districts the principal works are saw-mills, smelting works, sugar-mills, and flour-mills, or industries of a domestic character intended to meet a day-to-day demand, or for the treatment of perishable goods.

The following table shows the number of hands employed in the metropolitan district as compared with the remainder of the State for the last ten years:—

Year.	Hands employed.		Year.	Hands employed.	
	Metropolitan District.	Country Districts.		Metropolitan District.	Country Districts.
1896	29,085	20,755	1901	42,415	23,815
1897	29,984	21,455	1902	43,577	22,692
1898	31,934	20,584	1903	43,752	21,881
1899	34,216	21,430	1904	45,409	22,627
1900	38,668	22,111	1905	48,842	23,333

There is a vast field open for the development of manufactures in New South Wales. Producing, as it does, the raw material of various kinds necessary for supplying the primary wants of civilisation in regard both to food and clothing, possessing illimitable resources of coal, together with vast deposits of iron and other mineral ores, and with the finest shipping port in the world, it is evident that the State must eventually become a potent factor in supplying the wants of Australia, if not of the world. The one great cause which has hitherto operated to restrict the development of manufacturing operations is the difficulty of drawing from a population so small and so widely scattered a fair profit on the capital required to carry them on.

CLASSIFICATION OF MANUFACTORIES.

The majority of the manufacturing industries may be classified as domestic industries—that is to say, industries called into existence by the natural resources of the State, or connected with the treatment of perishable products for immediate use; but there are also a considerable number of industries the products from which come into competition with imported goods. The number of hands engaged in these classes were—in domestic industries dependent on natural resources, 34,596; industries connected with the treatment of perishable products, 4,034; and in other industries, 33,545.

The industries are divided into nineteen classes, and the number of hands employed in each class during 1896, 1901, and each of the last three years, was as follows:—

Class of Industry.	No. of Hands Employed.				
	1896.	1901.	1903.	1904.	1905.
I. Treating Raw Materials, Product of Pastoral Pursuits, &c.	3,748	2,981	2,787	2,696	2,917
II. Oils and Fats, Animal, Vegetable, &c.	410	698	625	595	660
III. Processes in Stone, Clay, Glass, &c.	2,441	3,007	3,073	3,191	3,413
IV. Working in Wood	3,934	5,108	5,167	4,923	5,244
V. Metal Works, Machinery, &c.	8,705	13,926	12,851	13,339	13,831
VI. Connected with Food and Drink, &c.	10,179	11,372	10,469	10,888	11,546
VII. Clothing and Textile Fabrics, &c.	9,750	14,497	15,486	16,611	18,106
VIII. Books, Paper, Printing, and Engraving	4,940	5,573	6,135	6,360	6,468
IX. Musical Instruments	18	226	219	240	348
X. Arms and Explosives	...	11	19	19	16
XI. Vehicles and Fittings, Saddlery and Harness, &c	1,592	2,541	2,102	2,276	2,417
XII. Ship and Boat Building, &c.	1,132	1,541	1,501	1,358	1,478
XIII. Furniture, Bedding, and Upholstery	1,183	2,140	1,923	1,915	1,966
XIV. Drugs, Chemicals, and By-products	331	450	693	792	869
XV. Surgical and other Scientific Instruments	35	69	64	69	71
XVI. Jewellery, Timepieces, and Plated Ware	102	165	257	368	393
XVII. Heat, Light, and Power	859	1,417	1,672	1,682	1,676
XVIII. Leatherware, N.E.I.	33	117	133	192	180
XIX. Minor Wares, N.E.I.	448	391	457	522	576
Total	49,840	66,230	65,633	68,036	72,175

It will be seen that, coincident with the decrease in live stock, there was a decline in the industries dealing with pastoral products, which are, however, again showing signs of a revival. Establishments working in connection with stone, clay, glass, &c., show an increased employment, due largely to the expansion of the brickyards; and the increase in wood-workers is mainly due to the increased business of saw-mills and joinery works, indicating greater activity in the building trades. Metal works show a great advance since 1896, and almost every branch of the industry discloses an improvement, the most noticeable being smelting, railway workshops, and carriage building, ironworking, and engineering. The increase in the clothing industry is gratifying, but, unfortunately, the manufacture of woollen materials shows no advance. In furniture-making there has been a large increase in the number of hands; but it is a matter for regret that the industry is, to a large extent, in the possession of the Chinese. The extension of electric power has led to a considerable increase of employment, and in the minor industries there is also evidence of greater activity.

The following table has been prepared in order to show, in as concise a manner as possible, the principal details respecting each class of industry for the year 1905:—

Class of Industry.	Number of Establishments.	Average number of Hands employed.			Average time worked per hand.	Amount of wages paid.	Average Horse-power of Machinery used.	Value of Machinery, Plant, &c.
		Males.	Females.	Total.				
					months	£	No.	£
I. Treating Raw Materials, &c.	254	2,905	12	2,917	8·80	175,616	2,370	217,957
II. Oils and Fats, &c.	47	566	94	660	11·45	43,548	496	153,093
III. Processes in Stone, Clay, Glass, &c.	238	3,312	101	3,413	11·27	284,363	3,841	398,957
IV. Working in Wood	449	5,226	18	5,244	10·48	378,037	6,460	876,665
V. Metal Works, Machinery &c.	352	13,795	36	13,831	11·71	1,378,651	8,922	1,539,901
VI. Connected with Food and Drink, &c.	677	9,734	1,812	11,546	10·74	793,193	14,375	2,595,356
VII. Clothing and Textile Fabrics, &c.	694	6,133	11,973	18,106	11·68	821,938	1,160	290,206
VIII. Books, Paper, Printing, &c.	321	5,178	1,290	6,468	11·89	519,191	1,434	627,287
IX. Musical Instruments	6	315	33	348	12·00	29,328	31	5,275
X. Arms and Explosives	3	14	2	16	12·00	765	4	290
XI. Vehicles, Saddlery, and Harness, &c.	250	2,370	47	2,417	11·86	154,510	366	28,004
XII. Ship and Boat Building, &c.	35	1,474	4	1,478	12·00	156,616	2,178	168,065
XIII. Furniture, Bedding, and Upholstery	113	1,821	145	1,966	11·84	141,352	263	29,269
XIV. Drugs, Chemicals, and By-products	39	598	271	869	11·89	54,156	554	96,114
XV. Surgical and other Scientific Instruments	8	60	11	71	12·00	6,180	7	2,200
XVI. Jewellery, Plated Ware, &c.	32	363	30	393	12·00	30,219	39	11,383
XVII. Heat, Light, and Power	132	1,623	53	1,676	11·81	184,856	27,373	1,496,881
XVIII. Leatherware, N.E.I.	9	170	10	180	12·00	10,915	52	4,731
XIX. Minor Wares, N.E.I.	41	454	122	576	11·64	27,916	129	14,317
Total	3,700	56,111	16,064	72,175	11·34	5,191,350	70,054	7,919,948

The hands employed in manufactories numbered 72,175, but only 58,842 were actually engaged in the different processes of manufacture, or in the sorting and packing of finished articles. The number of employees and their occupation was as follows:—

Class of Industry.	Working Proprietors, Managers, and Overseers.	Clerks, &c.	Engine-drivers, &c.	Workers in Factory, Mill, &c.	Carters, Messengers, &c.	Persons regularly employed at their own homes.	Total.
Treating Raw Materials, Product of Pastoral Pursuits, &c.	310	71	166	2,218	152	...	2,917
Oils and Fats, Animal, Vegetable, &c.	69	51	20	458	56	6	660
Processes in Stone, Clay, Glass, &c.	304	86	127	2,566	330	...	3,413
Working in Wood	571	254	357	3,511	551	...	5,244
Metal Works, Machinery, &c.	632	426	386	12,168	219	...	13,831
Connected with Food and Drink, &c.	967	677	603	8,410	889	...	11,546
Clothing and Textile Fabrics, &c.	983	214	27	16,279	170	433	18,106
Books, Paper, Printing, and Engraving	589	446	50	5,131	252	...	6,468
Musical Instruments	9	15	2	316	6	...	348
Arms and Explosives	4	...	...	10	2	...	16
Vehicles and Fittings, Saddlery and Harness, &c.	303	64	8	2,010	32	...	2,417
Ship and Boat-building, &c.	52	40	30	1,259	97	...	1,478
Furniture, Bedding, and Upholstery	168	46	10	1,711	31	...	1,966
Drugs, Chemicals, and By-products	68	36	23	699	43	...	869
Surgical and other Scientific Instruments	12	4	1	48	6	...	71
Jewellery, Timepieces, and Plated Ware	41	23	1	320	8	...	393
Heat, Light, and Power	131	91	309	1,093	52	...	1,676
Leatherware, N.E.I.	14	8	1	152	5	...	180
Minor Wares, N.E.I.	55	19	5	483	14	...	576
Total	5,282	2,571	2,126	58,842	2,915	439	72,175

The engine-drivers shown above were not engaged in actual manufacturing operations.

INDUSTRIES TREATING RAW MATERIALS, THE PRODUCT OF PASTORAL AND AGRICULTURAL PURSUITS.

The operations of those industries which are engaged in treating raw materials, the product of pastoral pursuits, are dependent to a large extent upon the seasons, and owing to the decrease in the number of live stock depastured, the number of hands employed is much less than in former years, although there is evidence of an improvement since last year.

Industries.	Number of Establishments.	Average number of Hands employed.			Average time worked per hand.	Amount of wages paid.	Average Horse-power of Machinery used.	Value of Machinery Plant, &c.
		Males.	Females.	Total.				
I.—TREATING RAW MATERIAL, &c.					months	£	No.	£
Boiling-down and Tallow Refining	22	258	6	264	10·94	19,415	271	36,217
Tanneries	85	859	2	861	11·75	66,787	680	66,131
Woolscouring and Fellmongering	75	1,364	3	1,367	7·55	76,428	1,000	90,669
Chaff-cutting, &c.	72	424	1	425	5·50	12,986	419	24,940
Total	254	2,905	12	2,917	8·80	175,616	2,370	217,957

The figures do not include boiling-down and wool-washing works on stations, as they are only in operation for a few weeks in each year. The number of hands employed varies considerably during the year, and in certain seasons many more persons are at work, especially at wool-scouring.

Tallow refining is not the important industry it was ten years ago, when there was a large surplus of live stock to be disposed of each year, and the price of tallow was high enough to encourage the disposal of stock in this manner. With the return of good seasons, however, together with an increase in prices, there has been an increase in the production of tallow during the last two years. Particulars of the production may be seen in the chapter on the "Pastoral Industry."

No information is available regarding the number of skins tanned during last year, nor can the quantity of wool washed be stated with exactitude; but the export of washed wool amounted to 41,371,319 lb.

OILS AND FATS—ANIMAL, VEGETABLE, &C.

Industries.	Number of Establishments.	Average number of Hands employed.			Average time worked per hand.	Amount of Wages Paid.	Average Horse-power of Machinery used.	Value of Machinery, Plant, &c.
		Males.	Females.	Total.				
II.—OILS, FATS, &C.					months	£	No.	£
Oil and Grease	7	86	...	86	10·30	8,101	162	33,316
Soap and Candles	40	480	94	574	11 61	35,447	334	119,717
Total	47	566	94	660	11·45	43,548	496	153,033

Tallow being one of the staple products of the country, the manufacture of soap and candles, as might be expected, is firmly established. The quantity of toilet and fancy soap made, is, however, as yet but small, and in quality it is scarcely equal to that imported. Common soap of local make is both cheaper and better than the imported article, and practically commands the local market.

With the extension of gas-lighting, which is now almost universal throughout the habitations in the metropolitan district, the consumption of candles gradually decreased, and there was a corresponding decrease in the production, which was almost wholly for local use. In recent years there has been an improvement, and an export trade with the other States has sprung up. The following table gives particulars of the soap and candle making industry during the last ten years:—

Year.	Soap and Candle Factories.	Hands Employed.	Quantity manufactured (as returned by manufacturers).		Horse-power of Plant (full capacity).
			Soap.	Candles.	
	No.	No.	cwt.	lb.	H.-p.
1896	43	370	150,373	3,734,050	770
1897	40	310	187,142	2,638,175	726
1898	35	276	139,983	2,312,778	663
1899	41	287	142,526	2,675,006	614
1900	43	351	147,515	2,073,427	818
1901	44	533	233,700	3,897,468	829
1902	40	425	175,822	2,965,766	533
1903	47	520	199,807	3,231,842	744
1904	46	508	208,677	3,984,035	556
1905	40	574	212,658	4,226,082	520

PROCESSES IN STONE, CLAY, GLASS, &C.

As the majority of these industries are closely associated with the building trade, the employment afforded reflects, to a great extent, the condition of that trade. The number of hands employed has not varied much since 1901, but shows a substantial increase since 1896. The details of each industry for 1905 were as follow:—

Industries.	Number of Establishments.	Average number of Hands employed.			Average time worked per hand.	Amount of Wages paid.	Average Horse-power of Machinery used.	Value of Machinery, Plant, &c.
		Males.	Females.	Total.				
III.—STONE, CLAY, GLASS, &C.					Months	£	No.	£
Bricks and Tiles	172	1,935	71	2,006	11·17	160,107	1,827	200,963
Glass (including Bottles)	9	340	...	340	11·21	20,295	19	9,345
Glass (Ornamental)	12	158	2	160	12·00	12,445	29	5,658
Lime, Plaster, Cement, and Asphalt	20	479	1	480	11·84	58,472	1,773	147,276
Marble, Slate, &c.	12	146	...	146	11·37	13,034	92	14,100
Modelling, &c.	1	9	...	9	12·00	904	...	202
Pottery and Earthenware	12	245	27	272	10·53	19,106	101	21,413
Total	238	3,312	101	3,413	11·27	284,363	3,841	398,957

In 1891 there were 2,018 hands employed in brickworks, and the output of bricks was 184,682,000. There was then a decline in building operations, and during the two years after the crisis of 1893 the output fell below 100,000,000. There has since been an improvement, as will be seen from the following figures, which give the details of the industry during the last ten years:—

Year.	Brickworks.	Hands Employed.	Bricks made (as returned by makers).	Horse-power of Plant (full capacity).
	No.	No.	No.	H.-p.
1896	150	1,295	102,459,000	1,242
1897	149	1,166	113,267,000	1,326
1898	131	1,252	113,126,000	1,281
1899	148	1,448	120,375,000	1,552
1900	157	1,535	128,430,000	1,639
1901	182	1,823	159,254,000	1,543
1902	182	1,973	180,727,000	1,986
1903	163	1,921	202,681,000	2,243
1904	165	1,893	154,480,000	2,701
1905	172	2,006	162,643,000	2,974

The manufacture of tiles, pottery, and earthenware is usually carried on in conjunction with brickmaking, although there are establishments devoted solely to this branch of the industry. The value of the tiles, pottery, and earthenware manufactured in 1905 was £57,900, of which £36,900 was produced from works principally engaged in brickmaking.

WORKING IN WOOD.

These industries are largely connected with the supply or preparation of building materials, and, like those in the class immediately preceding, afford a reliable index to the state of the building trade.

Industries.	Number of Establishments.	Average number of Hands employed.			Average time worked per hand.	Amount of Wages paid.	Average Horse-power of Machinery used.	Value of Machinery, Plant, &c.
		Males.	Females.	Total.				
IV.—WORKING IN WOOD.					Months	£	No.	£
Boxes and Cases	16	215	1	216	11·38	18,603	241	8,004
Cooperage	13	251	...	251	12·00	20,116	139	25,763
Joinery	57	779	4	783	11·79	68,503	529	51,152
Saw-mills	339	3,874	12	3,886	10·04	266,424	5,467	286,011
Wood Turning, &c.	24	107	1	108	11·35	4,401	84	5,735
Total	449	5,226	18	5,244	10·48	378,047	6,460	376,665

Of the 5,244 hands employed in these industries, 2,042 were engaged in the metropolitan district, and 3,202 in the country, the employment in the latter district being almost wholly in connection with saw-mills, which provided work for 3,010 hands. The total number of hands engaged in saw-mills numbered 3,886, which shows an increase compared with the figures for recent years, but is far below the total in 1892. The details of the industry during the last ten years were as follow:—

Year.	Saw Mills.	Hands Employed.	Plant and Machinery.		Year.	Saw Mills.	Hands Employed.	Plant and Machinery.	
			Power (full capacity).	Value.				Power (full capacity).	Value.
	No.	No.	H.-p.	£		No.	No.	H.-p.	£
1896	326	3,187	5,385	265,020	1901	345	4,088	6,547	273,883
1897	303	3,062	5,377	226,075	1902	331	3,930	6,536	273,402
1898	259	3,061	5,176	212,555	1903	333	3,936	6,857	289,258
1899	259	3,004	5,130	213,477	1904	324	3,655	6,379	285,935
1900	269	3,294	5,499	242,900	1905	339	3,886	6,848	286,011

The timber cut in forest saw-mills during 1905 measured 112,580,000 superficial feet.

The growth of the employment in box factories is a testimony to the great advances made by the export trade in butter and rabbits, the former being despatched in boxes and the latter in crates. As showing the increased employment, it may be mentioned that in 1896 there were only 95 hands employed in these establishments, as compared with 216 in 1905.

METAL WORKS, MACHINERY, &c.

The industries comprised in this class are the most important to the industrial workers in the State, for, although the clothing trade employs more hands, in the amount of wages paid it is greatly below the metal-working industry, owing to the large percentage of females employed.

The following table shows the employment afforded, and other particulars, for each branch of the industry during 1905:—

Industries.	Number of Establishments.	Average number of Hands employed.			Average time worked per hand.	Amount of Wages paid.	Average Horse-power of Machinery used.	Value of Machinery and Plant.
		Males.	Females.	Total.				
V. —METAL WORKS, MACHINERY, &c.					Months	£	No.	£
Agricultural Implements	17	381	5	386	11·45	26,090	101	11,584
Brass and Copper	11	269	...	269	12·00	15,668	62	18,467
Cutlery	4	22	...	22	12·00	1,283	9	1,620
Engineering	109	3,077	6	3,083	11·88	264,277	1,526	272,319
Galvanised Iron	34	563	5	568	11·79	38,387	83	20,156
Ironworks and Foundries	52	1,279	1	1,280	11·87	103,807	882	112,719
Lead Mills	2	21	...	21	12·00	2,750	170	11,000
Railway Carriages	3	358	...	358	11·08	25,672	80	17,825
Railway and Tramway Workshops	29	3,537	12	3,549	12·00	429,977	812	251,492
Smelting	41	3,133	...	3,133	11·36	389,661	4,890	757,628
Stoves and Ovens	11	298	...	298	12·00	19,216	62	8,048
Tinsmithing	30	343	4	347	11·97	18,555	27	14,106
Wireworking	7	303	2	305	11·85	20,881	126	25,647
Other Metal Works	11	221	1	222	11·77	20,547	92	12,870
Total	352	13,795	36	13,831	11·71	1,378,651	8,922	1,529,901

In 1896 there were only 8,705 hands engaged in works of this class, so that there has been an increase of over 5,100, or 59 per cent., since that year. The chief increase is in works connected with the manufacture and repair of railway engines and carriages, which show 1,429 more hands; and this is only to be expected, in view of the large increase in rolling-stock, consequent upon the development of the railways and the extension of the metropolitan tramway system. Engineering works show an increase of 1,117 hands since 1896, and ironworks 238. It has long been a matter for regret that, although the State possesses large and valuable deposits of iron ore at Carcoar and Cadia, there is no establishment engaged in the manufacture of iron from its ore. Works were erected at Eskbank with this end in view, but the actual manufacture of iron was abandoned, and the work done consists of re-rolling old rails and utilising scraps for the manufacture of iron bars, rods, and ordinary castings, &c.

The question of establishing the industry has attracted considerable attention in both the Federal and State Parliaments. So important was the matter deemed by the Federal authorities, that a Bill was introduced, which provided that a bonus should be paid for the manufacture of iron; but this was amended to admit of payment of the bonus only to works established by the Government of any State of the Commonwealth. A Royal Commission was then appointed to inquire into the whole matter, and after exhaustive inquiries the members unanimously agreed that all the materials necessary for the manufacture of iron from its ores were to be found in Australia; but they were evenly divided in opinion on the question of paying bonuses to private individuals, and it was only on the casting vote of the Chairman that the report was in favour thereof.

In the Federal Tariff provision is made for imposing *ad valorem* duties on iron and its manufactures, so soon as it is certified by the Minister for Customs, and confirmed by both Houses of Parliament, that the manufacture of the articles has been sufficiently established in the Commonwealth.

A decisive step towards establishing the industry in New South Wales was made during 1905 by the State Government, which called for tenders for the manufacture, supply, and delivery of the whole of the pig-iron and rolled iron and steel required by them for a period of seven years.

The principal conditions of contract were that the contractor should establish, within the State of New South Wales, a blast furnace or furnaces, and erect all machinery and plant necessary for the conversion of iron ore into pig-iron, and rolled steel and iron, and capable of supplying all the materials included in the contract. A satisfactory tender was received, and the necessary plant is now in course of erection.

In smelting works there are now 1,057 more hands employed than there were in 1896. The majority of the work done is in connection with the treatment of silver and lead ores; but there are other establishments dealing with gold, copper, tin, and other ores, which are brought from all parts of the Commonwealth, and also from New Caledonia. Quartz batteries are excluded from these figures, but establishments using a cyanide plant are included. Within recent years, zinc-extracting plants on an extensive scale have been established in the State, and both at Broken Hill and elsewhere great attention is being directed to this matter. Further details in connection therewith are given in the chapter dealing with "Mines and Minerals."

INDUSTRIES CONNECTED WITH FOOD AND DRINK.

From the figures given in an earlier part of this chapter it would appear that industries connected with food and drink have increased but little in importance since 1896, for the hands then employed number only 1,367 less than in 1905. Investigation shows, however, that there have been large individual increases in several industries, but these have been counterbalanced by a decline in sugar-milling, and in meat preserving and freezing. In 1905 there were 11,546 hands usually employed in this class, but the number fluctuates considerably during the year, as employment in establishments manufacturing aerated waters, butter, cheese, flour, sugar, and jam varies with the seasons. The following table shows the average number of hands employed in each industry during 1905:—

Industries.	Number of Establishments.	Average number of Hands employed.			Average time worked per hand.	Amount of Wages paid.	Average Horse-power of Machinery used.	Value of Machinery, Plant, &c.
		Males.	Females	Total.				
CLASS VI.—FOOD AND DRINK, &c.					Months.	£	No.	£
Bacon-curing	15	127	1	128	11·06	12,718	94	14,428
Butter Factories and Creameries	137	837	5	842	11·49	75,091	1,613	212,939
Butterine and Margarine	2	18	....	18	12·00	1,006	10	1,600
Cheese Factories	25	77	....	77	10·25	4,304	37	6,233
Condensed Milk	3	50	....	50	12·00	2,914	40	12,164
Meat and Fish Preserving	8	795	36	831	9·79	48,182	287	31,800
Biscuits	5	528	436	964	11·95	41,576	119	48,224
Confectionery	24	614	320	934	11·83	43,856	220	44,797
Cornflour, Oatmeal, &c.	17	207	131	338	11·80	23,895	385	40,611
Flour-mills	78	878	2	875	10·14	77,559	3,662	294,760
Jam and Fruit Canning	11	534	167	701	10·74	32,803	121	20,911
Pickles, Sauces, and Vinegar	7	35	80	115	12·00	4,455	3	1,280
Sugar Mills	5	652	....	652	5·12	41,965	2,790	502,879
Sugar Refinery	1	410	....	410	12·00	43,078	943	374,124
Aerated Waters, Cordials, &c.	211	1,197	33	1,230	11·75	73,945	440	113,889
Breweries	42	1,026	2	1,028	11·93	108,752	687	233,328
Condiments, Coffee, Spices, &c.	20	303	208	511	12·00	27,545	321	27,566
Distilleries	2	18	....	18	12·00	1,750	7	32,533
Ice and Refrigerating	46	838	1	839	7·96	63,677	2,320	362,181
Malting	5	33	....	33	8·30	3,313	43	19,640
Tobacco, Cigars, &c.	13	562	390	952	11·10	65,809	233	104,466
Total	677	9,734	1,812	11,546	10·74	798,198	14,375	2,505,353

In the preparation of food and drink, machinery enters largely into use, as will be seen from the figures given above. There are many important industries in this class, but for only a few of them is information available regarding the materials treated and the output of manufactured articles. Taking these in their order, it will be seen that the industries first enumerated deal wholly with dairy products. The production from these industries is not included in the value of production from manufactories, as it belongs essentially to the dairying industry, and has been included therein. Creameries are not counted as separate establishments when worked in conjunction with butter factories; but the hands employed are included in the figures given. There has been an enormous increase in the quantity of butter made in recent years, especially in the factory-made article. Details regarding the output are given in the chapter dealing with the "Dairying Industry." In the following table will be found particulars of the machinery in use and the number of hands employed during each of the last ten years. The numbers of factories and hands do not coincide with those shown in the preceding table, as they include factories on farms, the hands in which (251 males and 3 females in 1905) are not exclusively engaged in manufacturing dairy products alone, but in general farm labour, and are consequently included elsewhere:—

Year.	Factories								Estimated Value of Plant and Machinery.	Machinery in use.						Persons employed.	
	Butter only.	Creameries only.	Cheese only.	Bacon and Ham only.	Butter and Cheese.	Butter and Bacon.	Butter, Cheese, and Bacon.	Total.		Engines.	Horse-power.	Butter Workers.	Churns.	Cream Separators.	Cheese Presses.	Males.	Females.
	No.	No.	No.	No.	No.	No.	No.	No.	£	No.	No.	No.	No.	No.	No.	No.	No.
1896	191	202	16	12	15	17	4	457	212,216	456	2,929	241	339	587	152	1,246	151
1897	181	294	18	8	9	2	2	514	224,526	583	3,415	187	263	667	191	1,329	124
1898	187	356	23	10	7	..	3	586	248,844	608	3,332	192	272	724	202	1,432	97
1899	168	357	16	12	7	1	1	562	255,702	608	3,497	182	267	684	175	1,433	55
1900	164	346	19	13	7	4	3	556	255,320	605	3,456	198	272	667	177	1,378	47
1901	158	479	21	14	12	5	1	690	260,543	734	3,753	168	269	772	116	1,586	71
1902	163	306	31	18	6	3	1	528	263,764	576	3,207	153	274	571	147	1,304	56
1903	153	284	31	16	4	3	3	494	246,350	552	3,094	163	262	486	146	1,373	33
1904	145	271	28	14	4	2	1	465	251,322	525	3,066	178	257	431	96	1,364	26
1905	153	255	36	16	3	..	..	463	277,908	546	3,179	196	289	425	104	1,342	9

In view of the smaller number of live stock, it is only natural that the operations of meat-preserving and ice and refrigerating works should have declined, and in the former there were only 831 hands employed in 1905, as against 971 in 1896, while in the latter there were 839 and 1,047 in each year respectively. The carcases of 10,931 cattle and 356,894 sheep were treated in meat-preserving works, and of 3,435 cattle and 1,306,100 sheep in freezing establishments.

The amount of mill-power for grinding and dressing grain is ample for treating the flour consumed in the State; and the fact that New South Wales now produces more than sufficient wheat for its own requirements does not, therefore, make an increase in the number of flour-mills probable, as those in existence are not kept working to their full capacity.

In consequence of the failure of the wheat crop for the season ended 31st March, 1903, the operations of the mills were much restricted; but with the return of good seasons the industry resumed its normal position. The following table shows various details regarding flour-mills for a period of ten years :—

Year.	Flour Mills.	Hands Employed.	Wheat operated upon.	Flour made.	Plant and Machinery.	
					Power (full capacity).	Value.
	No.	No.	Bushels.	Tons.	H.-p.	£
1896	81	721	6,711,828	137,350	3,448	241,535
1897	81	740	6,592,118	134,613	3,888	255,490
1898	80	757	7,979,461	170,473	3,955	260,917
1899	80	815	7,458,366	156,409	4,065	269,753
1900	86	841	8,345,063	170,428	4,368	275,910
1901	89	880	9,369,534	191,504	4,421	254,335
1902	81	812	8,853,048	185,147	4,495	267,372
1903	79	751	6,030,409	121,074	4,947	262,297
1904	81	875	10,418,979	210,137	4,851	293,328
1905	78	875	10,117,793	205,805	5,158	294,760

Particulars regarding the output of aerated-water factories are not available; but the hands employed show an increase of 252 since 1896. At certain seasons of the year a larger number of hands is employed, the greatest number at work in 1905 being 1,449. The number of breweries is becoming less each year, although the persons engaged show an increase of 237 since 1896. The production during the last few years has declined, and there is other evidence to show that the average consumption of all alcoholic liquors is steadily decreasing. The materials used in breweries for manufacturing purposes and the actual output were:—

	Malt.	Hops.	Sugar.	Other Material.	Ale, Beer, &c., manufactured.
	bushels.	lb.	tons.	centals.	gallons.
1903	466,673	601,339	3,495	10,081	14,211,888
1904	441,844	557,400	3,252	10,133	13,651,208
1905	458,371	558,661	3,370	6,209	13,873,239

The output shown above is the actual quantity manufactured, and differs from the figures in the following table, which gives the quantity on which excise was paid:—

Year.	Breweries.	Hands Employed.	Ale, Beer, &c., manufactured, which paid Excise.	Horse-power of Plant (full capacity).	Year.	Breweries.	Hands Employed.	Ale, Beer, &c., manufactured, which paid Excise.	Horse-power of Plant (full capacity)
	No.	No.	Gallons.	H.-p.		No.	No.	Gallons.	H.-p.
1896	57	791	10,177,360	1,222	1901	51	1,016	13,253,600	1,477
1897	59	871	10,806,400	1,183	1902	46	1,033	14,029,648	1,074
1898	56	830	11,674,880	1,384	1903	45	969	13,201,098	982
1899	57	885	12,218,560	1,279	1904	42	968	12,877,757	961
1900	52	920	13,410,800	1,623	1905	42	1,028	13,248,336	1,089

There are two distilleries in the State, one of which is a wine distillery, the output being 35,850 proof gallons of brandy from 218,000 gallons of wine; the other establishment is worked in connection with sugar-refining, and used 125,530 cwt. of molasses in 1905 for 620,682 gallons of proof spirit.

The manufacture of sugar has long been an important industry, and so far back as 1878 the sugar-mills in the State numbered 50, of which 24 used steam-power, whilst 26 were worked by cattle, and the number of workmen employed was 1,065. These had increased in the year 1886 to 83 steam-mills and 19 worked by cattle, whilst the number of men employed and the quantity of sugar and molasses turned out had correspondingly increased; but since that time the fall in the value of sugar has caused the closing of all the smaller establishments. Almost everywhere the tendency to concentrate the manufacture of sugar in large central establishments is increasing, and the small mills are rapidly disappearing to make room for larger establishments, where business is strictly confined to the industrial process of sugar-making, the planters attending solely to the cultivation of the cane. Owing to the fact that many of the farmers on the North Coast have abandoned sugar-growing in favour of dairying, the area under cane is much smaller than it was ten years ago, and the production has correspondingly decreased. There are at present only 5 mills in the State, and employment is afforded to less than half the number of hands engaged ten years ago:—

Year.	Sugar Mills.	Hands Employed.	Horse-power of Plant (full capacity).	Quantity manufactured (as returned by manufacturers).	
			Steam.	Sugar.	Molasses.
	No.	No.	H.-p.	cwt.	Gallons.
1896	23	1,475	3,479	571,140	2,520,580
1897	19	1,297	3,620	553,066	1,421,406
1898	20	1,168	3,331	582,198	1,647,785
1899	13	1,038	3,212	307,048	1,064,850
1900	8	690	2,988	398,760	1,179,600
1901	12	695	2,995	390,375	1,300,909
1902	8	633	3,407	430,884	1,073,640
1903	6	586	3,146	435,718	1,367,020
1904	6	643	3,146	400,150	1,296,590
1905	5	652	3,140	402,040	1,263,100

There is only one sugar refinery in the State, and it treats both local and imported sugars, so that its operations are extending each year. The hands employed show a great decrease since 1900, but owing to increased power and improvements in plant, the quantity of sugar melted has increased. The following table shows particulars of the industry since 1896. The sugar-cane melted in 1905 represented 1,317,500 cwt. of refined sugar:—

Year.	Sugar Refinery.	Hands Employed.	Cane Sugar Melted.	Horse-power of Plant (full capacity).	Year.	Sugar Refinery.	Hands Employed.	Cane Sugar Melted.	Horse-power of Plant (full capacity).
	No.	No.	cwt.	H-p.		No.	No.	cwt.	H-p.
1896	1	391	866,000	440	1901	1	450	1,246,600	1,000
1897	1	398	864,400	440	1902	1	531	1,179,200	958
1898	1	454	948,400	500	1903	1	415	1,284,380	973
1899	1	450	1,032,400	550	1904	1	390	1,313,800	974
1900	1	510	1,191,000	700	1905	1	410	1,368,000	948

Tobacco of local manufacture is, to a large extent, superseding the imported article, while cigarettes made in this State now practically command the Australian market, and the manufacture of cigars is also increasing.

A large amount of imported leaf is used in the manufacture of tobacco in the State, the proportion of locally-grown tobacco being less than one-third. As shown in the chapter on "Agriculture," the acreage and production of tobacco declined in each year from 1897 to 1902. A slight increase is noticeable in later years, and efforts have been made to stimulate the industry, the manufacturers having arranged to take all the leaf grown, at certain fixed prices according to quality. The following table shows details of the operations of tobacco factories for the last ten years. The large increase in the number of females is principally due to the extension of cigarette-making, and they are chiefly employed in making holders and packing cigarettes:—

Year	Establishments.		Hands Employed.		Tobacco Leaf used.		Tobacco, Cigars, and Cigarettes manufactured.			Plant and Machinery.	
	Tobacco.	Cigars and Cigarettes.	Males.	Females	Australian grown Leaf.	Imported Leaf.	Tobacco.	Cigarettes.	Cigars.	Power (full capacity).	Value.
	No.	No.	No.	No.	lb.	lb.	lb.	lb.	lb.	h.-p.	£
1896	11	21	526	188	1,351,920	691,769	1,857,616	169,520	16,553	212	55,700
1897	11	13	498	147	1,229,821	876,231	1,902,284	189,007	14,761	207	41,135
1898	9	14	526	172	1,224,919	1,110,751	2,081,260	232,732	21,678	204	44,710
1899	9	18	544	197	1,243,580	1,167,417	2,123,196	288,509	29,265	204	44,574
1900	7	13	557	292	875,236	1,558,970	2,045,932	364,803	50,168	221	49,165
1901	6	14	621	440	883,615	2,114,456	2,324,231	457,276	67,128	302	69,124
1902	5	13	678	440	966,156	2,520,581	3,089,613	634,175	66,330	338	82,269
1903	5	18	669	426	1,009,745	2,714,578	3,329,938	790,697	45,297	462	92,355
1904	4	17	648	376	1,256,339	2,709,569	3,404,201	829,851	47,756	464	106,793
1905	4	16	573	391	1,145,923	2,606,702	3,318,719	818,400	48,850	425	104,766

Prior to 1902 the figures in column six, showing the tobacco leaf used, represent New South Wales leaf only.

CLOTHING AND TEXTILE FABRICS.

These industries afford the greatest employment, but in point of production and wages paid they are below several of the other classes. Since 1896 the number of hands employed has increased by 8,356, of whom 1,654 were males and 6,702 females. In the earlier year male represented 46 per cent. of the total employees, and in 1905 only 34 per cent. The number of hands engaged in each branch of the industry is shown in the following table:—

Industries.	Number of Establishments.	Average number of Hands employed.			Average time worked per hand.	Amount of Wages paid.	Average Horse-power of Machinery used.	Value of Machinery Plant, &c.
		Males.	Females	Total.				
CLASS VII.—CLOTHING AND TEXTILE FABRICS, &C.					Months.	£	No.	£
Woollen and Tweed Mills ..	3	151	111	262	12·00	12,538	234	31,540
Boots and Shoes	98	3,021	1,444	4,465	11·41	247,579	570	122,429
Slop Clothing..............	44	760	3,392	4,152	11·54	174,975	54	29,436
Clothing (Tailoring)	213	1,387	1,649	3,036	11·89	198,927	....	10,423
Dressmaking and Millinery (makers' material)	147	53	2,763	2,816	11·66	74,994	2	6,380
Dressmaking and Millinery (customers' material)	112	1	840	850	11·52	12,950	....	2,381
Dyeworks and Cleaning	6	33	21	54	12·00	3,395	4	1,219
Furriers	4	17	19	36	12·00	1,629	1	120
Hats and Caps	21	318	586	904	11·96	37,130	92	29,650
Waterproof and Oilskin	5	41	172	213	11·64	9,255	8	2,564
Shirts, Ties, and Scarfs	28	73	863	936	11·91	30,331	26	7,984
Rope and Cordage	5	181	3	184	11·95	10,023	137	11,301
Tents and Tarpaulins	8	97	101	198	12·00	8,192	32	3,786
Total................	694	6,133	11,973	18,106	11·63	821,918	1,160	260,206

It is a strange anomaly to find that in New South Wales, the greatest wool-producing country in the world, only 262 hands find employment in the manufacture of woollen materials. Woollen-mills were amongst the earliest works established in the State, but the industry has progressed but little since its first establishment, and the number of hands employed has practically remained stationary for forty years. Details of the hands employed, and the output for the last ten years, are given below :—

Year.	Woollen Mills.	Hands Employed.			Woollen Cloth and Tweed manufactured.	Horse-power of Plant (full capacity).
		Males.	Females.	Total.		
	No.	No.	No.	No.	yds.	H.-p.
1896	5	162	70	232	588,015	170
1897	5	149	61	210	440,177	201
1898	5	169	72	241	487,374	250
1899	4	144	78	222	428,158	215
1900	4	163	58	221	460,187	210
1901	4	162	72	234	525,020	325
1902	4	172	104	276	566,296	305
1903	4	170	110	280	458,302	330
1904	3	148	97	245	481,289	305
1905	3	151	111	262	459,590	329

During 1905 372,179 lb. of scoured wool were used, and, in addition to the cloth shown above, there were manufactured 4,549 yards of flannel, and 16,367 blankets, rugs, and shawls. The quantity of cloth manufactured showed no signs of increase up to the end of 1905, and it is apparent that a disinclination has existed, on the part of purchasers, to buy clothing made from locally-made tweed, notwithstanding that the mills are capable of producing cloth of the very highest quality. During the latter half of 1905 there was an improved demand for locally-made cloth; but until the prejudice in favour of imported tweeds has been overcome, no great expansion in the industry can be hoped for.

The largest employment in this class is afforded by boot and shoe factories and their progress has been more satsfactory, as will be seen from the following table:—

Year.	Boot and Shoe Factories.	Hands Employed.			Output (as returned by manufacturers).	
		Males.	Females.	Total.	Boots and Shoes made.	Slippers, and Canvas and Cloth Shoes made.
	No.	No.	No.	No.	Pairs.	Pairs.
1896	82	2,677	849	3,526	2,567,169	155,000
1897	81	2,683	837	3,520	2,735,528	210,356
1898	76	2,655	845	3,500	2,904,783	237,120
1899	79	2,602	908	3,510	3,207,196	285,365
1900	94	2,906	1,047	3,953	3,269,935	387,156
1901	100	2,861	1,118	3,979	2,821,724	512,584
1902	102	2,886	1,212	4,098	3,052,914	451,588
1903	93	2,938	1,350	4,288	3,166,475	397,531
1904	92	2,858	1,459	4,317	3,291,087	477,302
1905	98	3,021	1,444	4,465	3,250,243	435,912

A striking feature of the above table is the large increase in the employment of females. During the ten years the number of males increased by 344, while the females increased by 595, or over 70 per cent., and now represent about one-third of the hands employed.

Of all the industries none has progressed so rapidly as that connected with the manufacture of hats and caps. Until 1898 less than 100 hands were employed, but each year has seen an increase, and in the five years from 1901 to 1905 there was an average annual increase of about 120 hands:—

Year.	Hat and Cap Factories.	Hands Employed.			Power of Machinery.	Value of Plant and Machinery.
		Males.	Females.	Total.		
	No.	No.	No.	No.	H.-p. (full capacity).	£
1896	5	23	50	73	8	1,120
1897	4	33	59	92	6	2,400
1898	4	39	77	116	6	5,550
1899	5	63	121	184	16	4,000
1900	10	97	183	280	15	5,300
1901	10	132	198	330	27	7,034
1902	10	185	289	474	37	19,422
1903	15	225	318	543	142	22,152
1904	18	269	460	729	139	26,117
1905	21	318	586	904	120	29,650

A large number of females now find employment in making shirts, ties, and scarfs. So far as this State is concerned, the industry is comparatively a new one, for in 1896 only 67 persons were thus engaged, and in 1900, before the Federal tariff came into operation, 280. In 1905 the number was 848.

There has been a large increase in the number of hands engaged in the clothing trade, both in "slops" and order work, and in the former trade more attention is being devoted to the manufacture of ready-made costumes for women.

Books, Paper, Printing, &c.

These industries give employment to 6,468 persons, who are mostly engaged in printing or bookbinding, for the number engaged in manufacturing was only 800, and by far the greater portion of these were employed in making paper bags or boxes. In the process of bookbinding and in the manufacture of paper boxes and bags, girls are largely employed, and their employment is increasing, for, in 1896, females represented 11 per cent. of the total hands, as against 20 per cent. in 1905. The details of each industry for the latter year were as follow:—

Industries.	Number of Establishments.	Average number of Hands employed.			Average time worked per hand.	Amount of Wages paid.	Average Horse-power of Machinery used.	Value of Machinery, Plant, &c.
		Males.	Females.	Total.				
Class VIII.—Books, Paper, Printing, &c.					Months	£	No.	£
Electrotying and Stereotyping ...	5	67	12	79	12·00	5,045	7	13,224
Paper-making, Paper-boxes, Bags, &c.	15	361	439	800	11·59	35,866	575	56,569
Photo-engraving	12	108	13	121	11·82	8,622	4	8,420
Printing and Binding............	289	4,642	826	5,468	11·94	469,658	848	549,074
Total..........................	321	5,178	1,290	6,468	11·89	519,191	1,434	627,287

MUSICAL INSTRUMENTS.

There are six establishments engaged in the manufacture of musical instruments, and they employed 315 males and 33 females, who received wages amounting to £29,328. The machinery in use averaged 31 horse-power, and the value of the machinery and plant £5,275. The most important of the industries is piano-making, and instruments of a high class are now being turned out, wholly made in the State.

ARMS AND EXPLOSIVES.

The manufacture of small arms and ammunition is a matter of national importance, and has attracted the attention of the Commonwealth Government, but up to the present no works have been established. In New South Wales there are only three establishments engaged in the manufacture of explosives, and they employed 14 males and 2 females during 1905, and paid £765 in wages. The machinery in use averaged 4 horse-power, and the value of machinery and plant was £290.

VEHICLES, SADDLERY, HARNESS, &C.

The greater portion of the work done in these establishments is connected with the repair rather than the manufacture of vehicles; but there are many establishments where coaches and wagons are built throughout. With the extension of the railways and tramways, and the introduction of other improvements in the method of locomotion, this industry cannot be expected to show much further development, and, in fact, there is a decreased employment of 186 hands since 1901. Other industries in this class, such as cycle-building, are growing in importance; but the whole group of industries employs 124 hands less than in 1901. The following table shows the operations of each industry during 1905:—

Industries.	Number of Establishments.	Average number of Hands employed.			Average time worked per hand.	Amount of Wages paid.	Average Horse-power of Machinery used.	Value of Machinery, Plant, &c.
		Males.	Females.	Total.				
CLASS XI.—VEHICLES, SADDLERY, HARNESS, &C.					Months	£	No.	£
Coach and Wagon Building	173	1,586	5	1,591	11·88	101,113	96	26,415
Cycles	22	185	3	188	11·78	12,027	16	3,448
Perambulators	3	33	3	36	12·00	2,002	1	210
Saddlery, Harness, and Whips	47	517	36	553	11·90	36,101	8	5,156
Spokes, &c.	5	49	...	49	11·18	3,267	45	2,775
Total	250	2,370	47	2,417	11·86	154,510	166	38,004

SHIP AND BOAT BUILDING AND REPAIRING, &C.

The number of hands engaged in ship and boat building and repairing is decreasing of late years. So far as ship-building is concerned, there are signs of greater development than hitherto, for, in addition to wooden vessels, it has been shown that the manufacture of large iron vessels can be successfully carried out. At present, however, nearly all the ships built in the State are small wooden vessels for the river and island trades, or for passenger traffic between Sydney and its suburbs. In regard to boat-building, there is always considerable employment afforded in the Metropolitan district by the constant and increasing demand for yachts, motor-launches, and other pleasure craft, for which the harbour of Port Jackson is so eminently suited. In the docking of ships, there are considerably less hands employed than there were formerly, although additional accommodation has been provided, and there are now three of the largest graving docks in the world to be found at Sydney. The employment in this connection, however, is subject to great fluctuation, and at one period of the year there were 1,136 hands employed in dockyards alone. The following table shows the details of each industry for 1905:—

Industries.	Number of Establishments.	Average number of Hands employed.			Average time worked per hand.	Amount of Wages paid.	Average Horse-power of Machinery used.	Value of Machinery, Plant, &c.
		Males.	Females.	Total.				
CLASS XII.—SHIP AND BOAT BUILDING AND REPAIRING.					Months	£	No.	£
Docks and Slips	6	666	...	666	12·00	71,442	1,702	117,935
Sailmaking	4	23	2	25	12·00	1,830	......	75
Ship and Boat Building and Repairing	25	785	2	787	12·00	83,344	476	44,055
Total	35	1,474	4	1,478	12·00	156,616	2,178	162,065

FURNITURE, BEDDING, &c.

Industries connected with the manufacture of furniture, bedding, &c., have increased greatly in importance since 1896, when only 1,183 hands were employed. The chief increase has been in furniture making, but it is a matter for regret that the industry is, to a large extent, in the hands of the Chinese. Of the 1,398 hands engaged in this industry during 1905, 552, or nearly 40 per cent. were Chinese. The particulars relating to each industry for the year 1905 are shown in the following table:—

Industries.	Number of Establishments.	Average number of Hands employed.			Average time worked per hand.	Amount of Wages paid.	Average Horse-power of Machinery used.	Value of Machinery, Plant, &c.
		Males.	Females.	Total.				
CLASS XIII.—FURNITURE, BEDDING, &c.					Months	£	No.	£
Bedding, Flock, and Upholstery	19	262	101	363	11·85	27,797	107	8,002
Billiard Tables	3	42	1	43	12·00	4,421	17	990
Furniture and Cabinet-making	75	1,387	11	1,398	11·82	99,688	126	17,357
Picture Frames	12	94	31	125	12·00	7,109	11	2,520
Window Blinds	4	36	1	37	11·51	2,337	2	400
Total	113	1,821	145	1,966	11·84	141,352	263	29,269

DRUGS AND CHEMICALS AND BY-PRODUCTS.

There are several large establishments for the manufacture of drugs and chemicals, and one-fourth of the hands are females, who are principally engaged in packing or labelling the manufactured articles. The manufacture of by-products includes many articles such as baking powder, blue, blacking, &c., for domestic use, and the local article is gradually superseding imported goods. The following are the leading details in regard to each industry for the year 1905:—

Industries.	Number of Establishments.	Average number of Hands employed.			Average time worked per hand.	Amount of Wages paid.	Average Horse-power of Machinery used.	Value of Machinery, Plant, &c.
		Males.	Females.	Total.				
CLASS XIV.—DRUGS AND CHEMICALS					Months	£	No.	£
Chemicals, Drugs, and Medicines	17	423	172	595	11·87	38,979	328	76,319
Fertilisers	4	34	...	34	12·00	3,600	64	9,402
Paints and Varnishes, &c.	18	141	99	240	11·94	11,577	162	10,393
Total	39	598	271	869	11·89	54,156	554	96,114

SURGICAL AND SCIENTIFIC APPLIANCES.

Most of the establishments herein are engaged in the manufacture of optical instruments, such as spectacles, &c. The total number of establishments was 8, in which 60 males and 11 females were engaged throughout the year, receiving £6,180 in wages. The average power of machinery in use was 7 horse-power, and the value of machinery and plant £2,260.

TIMEPIECES, JEWELLERY, AND PLATED WARE.

While there are, as a matter of course, numerous small establishments where timepieces are repaired, there are but few of any kind in which the articles are actually manufactured, and these are included with those engaged in manufacturing jewellery:—

Industries.	Number of Establishments.	Average Number of Hands employed.			Average time worked per hand.	Amount of Wages paid.	Average Horse-power of Machinery used.	Value of Machinery, Plant, &c.
		Males.	Females.	Total.				
CLASS XVI.—TIMEPIECES, JEWELLERY, AND PLATED WARE.					Months	£	No.	£
Electro-plating	7	86	...	86	12·00	5,202	39	4,977
Manufacturing Jewellery	25	277	30	307	12·00	25,017	......	6,376
Total	32	363	30	393	12·00	30,219	39	11,353

HEAT, LIGHT, AND POWER.

Establishmnents connected with the supply of heat, light, and power, show an increase each year, and the number of hands employed has been doubled within the last ten years:—

Industries.	Number of Establishments.	Average Number of Hands Employed.			Average time worked per hand.	Amount of Wages paid.	Average Horse-power of Machinery in use.	Value of Machinery, Plant, &c.
		Males.	Females.	Total.				
CLASS XVII.—HEAT, LIGHT, AND POWER.					Months	£	No.	£
Coke-works	11	290	...	290	11·40	27,516	511	63,292
Electric Apparatus	6	50	...	50	9·96	2,383	......	1,221
Electric Light and Power	67	520	1	521	11·91	59,512	25,678	778,313
Gas-works and Kerosene	45	728	...	728	12·00	87,987	880	617,047
Lamps and Fittings, &c.	2	15	52	67	12·00	3,921	4	600
Hydraulic Power	1	20	...	20	12·00	3,537	500	26,418
Total	132	1,623	53	1,676	11·81	184,856	27,573	1,486,891

The chief development herein has occurred in connection with the supply of electric power and light, principally owing to the establishment of the metropolitan tramway and electric lighting systems.

The value of the machinery used in furnishing electric power and light now exceeds the plant in gas-works by £180,000, and the engines have a capacity of 31,862 horse-power. The rapid progress of these establishments is shown by the following table:—

Year.	Electric Supply Works.	Hands Employed.	Plant and Machinery.	
			Power (full capacity).	Value.
	No.	No.	H.-p.	£
1896	27	134	3,941	121,300
1897	26	118	2,404	102,694
1898	33	141	3,113	99,110
1899	33	147	2,779	129,027
1900	33	191	3,961	110,051
1901	53	340	12,447	282,842
1902	58	413	21,175	469,985
1903	73	434	21,994	528,587
1904	65	464	24,492	624,686
1905	67	521	31,862	778,313

Considerable progress has been made in the installation of electric lighting plants; nevertheless, the quantity of gas used is still increasing, and this notwithstanding the successful efforts made to economise its consumption without impairing its lighting utility. Although still chiefly used for lighting purposes, the use of gas is being steadily extended in connection with gas-engines and for cooking purposes. The following table shows particulars of the operations of gas-works during each of the last ten years. The value of plant does not include mains.

The rate charged to consumers varies in different country localities between 3s. per 1,000 feet in Bathurst and 15s. in Broken Hill and Deniliquin, while the prices for street lighting range from £2 11s. per lamp per annum in Lithgow to £9 in Wagga Wagga. The price charged by the principal company to private consumers in Sydney and suburbs is at present 4s. per 1,000 feet.

Year.	Gas-works.	Hands Employed.	Gas made (as returned by manufacturers).	Plant and Machinery.	
				Power (full capacity).	Value.
	No.	No.	1,000 cubic feet.	H.-p.	£
1896	42	621	1,816,613	625	454,353
1897	33	638	1,824,691	627	424,259
1898	41	598	1,788,218	1,111	445,286
1899	38	587	1,883,002	1,076	426,145
1900	41	620	2,007,654	1,101	463,206
1901	38	650	2,138,631	1,065	480,533
1902	42	648	2,304,814	1,011	536,338
1903	39	716	2,487,807	1,001	542,775
1904	40	692	2,598,650	1,091	601,976
1905	43	663	2,683,396	1,057	598,647

LEATHERWARE.

There are 170 males and 10 females employed in the manufacture of leatherware not elsewhere included, the majority of whom are engaged in making bags and portmanteaux. The employees in this class were busily engaged throughout the year, and received £10,915 as wages. The power of the machinery in average use was 52 horse-power, and the value of the machinery and plant was £4,751.

MINOR WARES.

Of the minor industries which cannot be classified under any of the preceding headings, the most important are broom and brush making, umbrella-making, and the manufacture of baskets, wicker-ware, and mats. The brooms are principally manufactured from millet grown in the State. An interesting feature of this industry is the employment which it affords to persons afflicted with blindness, and in 1905 there were 68 males and 15 females in the Sydney Industrial Blind Institution, who were employed in the manufacture of brushes, baskets, mats, &c. The particulars of the different industries for the year 1905 were as follows:—

Industries.	Number of Establishments.	Average number of Hands employed.			Average time worked per hand.	Amount of Wages paid.	Average Horse-power of Machinery used.	Value of Plant, Machinery, &c.
		Males.	Females.	Total.				
CLASS XIX.—MINOR WARES.					Months	£	No.	£
Baskets and Wicker-ware, Matting, &c.	6	33	2	35	10·97	1,884	...	90
Brooms and Brushware	15	220	28	248	11·77	12,725	41	3,687
Rubber Goods	6	96	4	100	11·34	4,155	68	8,165
Toys	2	12	...	12	12·00	256	7	330
Umbrellas	5	47	56	103	11·84	5,321	...	540
Other Industries	7	46	32	78	11·59	3,575	13	1,505
Total	41	454	122	576	11·64	27,916	129	14,317

AVERAGE TIME WORKED PER HAND.

In the preceding tables the average time worked per hand has been shown for each class. Taking the classes as a whole, it will be found that each employee worked, on an average, for 11·34 months of the year. It is, of course, impossible to show the actual time worked by employees; but from the figures given it will be seen that many of the workers suffered no loss from broken time, the most unfortunate in this respect being those engaged in industries dealing with raw materials—the product of pastoral pursuits.

WAGES.

The wages paid to employees in factories amounted in 1905 to £5,191,350, equal to £99,830 per week; so that their enforced idleness during part of the year caused a loss of about £302,000 to the workers.

It is impossible from the bare statements of wages supplied in these returns to give an approximation of the average wages of the workers. Simply to state the average wages of the whole body or any particular industry from the information contained herein would be absolutely misleading, as there are so many matters which have a direct bearing on the subject. The ages of the workers, the quantity of skilled and unskilled labour, the relative employment of males and females, the length of time worked by each class of workers, are all matters of vital importance in ascertaining the fair average wage paid, and these details are not available.

Under the provisions of the Factories and Shops Act, however, information is collected regarding the wages paid in factories which come within its operations. The subject is too comprehensive to be dealt with in this volume; but complete information concerning it will be found in the "Statistical Register," which is published each year.

POWER AND VALUE OF MACHINERY AND PLANT.

New South Wales has few running streams so situated as to be available for the purpose of driving machinery for manufacturing purposes, and nearly the whole of the power used is, therefore, derived from steam; but in some instances, chiefly in the metropolis, gas is employed. Other power is used only to a limited extent, and although electric engines of 4,780 horse-power are shown in the following table, they are almost solely used for lighting or motive purposes, and, in addition, their power is usually dependent upon some other class of engine for its development. In the table given below the number of establishments using machinery is shown, with the aggregate horse-power. By the term "full capacity" is understood the power capable of being generated by the boilers or machinery, while the "average used" represents the power generally used in carrying on the processes of manufacture.

Class of Industry.	Value of Machinery, Implements, Tools, and Conveyance Plant.	Number of Establishments using Machinery.	Horse-power of Machinery in use.											
			Full Capacity.						Average used.					
			Steam.	Gas.	Electricity.	Water.	Oil.	Turbine.	Steam.	Gas.	Electricity.	Water.	Oil.	Turbine.
	£													
Treating Raw Materials, Product of Pastoral Pursuits, &c.	217,957	231	3,081	216	15	15	4	...	2,186	168	8	14	2	...
Oils and Fats, Animal, Vegetable, &c.	153,033	25	802	3	142	...	...	...	493	3	102	...	...	...
Processes in Stone, Clay, Glass, &c.	398,957	89	5,140	102	74	...	8	...	3,758	75	53	...	8	...
Working in Wood	376,665	431	7,443	568	70	78	16	2	5,945	441	58	57	16	1
Metal Works, Machinery, &c.	1,529,901	283	11,111	741	2,283	...	31	...	8,345	555	1,757	...	22	...
Connected with Food and Drink, &c.	2,505,353	593	18,898	336	791	24	138	109	13,931	254	545	16	96	78
Clothing and Textile Fabrics, and Materials	260,206	152	871	661	253	...	4	...	651	505	215	...	4	...
Books, Paper, Printing, and Engraving	627,287	215	1,035	902	725	5	43	...	739	661	615	3	31	...
Musical Instruments	5,275	2	41	2	38	...	...	...	30	1	30	...	...	...
Arms and Explosives	290	1	4	...	...	...	...	...	4	...	...	...	...	...
Vehicles and Fittings, Saddlery and Harness, &c.	38,004	44	153	45	26	...	28	...	112	33	21	...	21	...
Ship and Boat Building, &c.	162,065	24	2,590	26	150	...	...	...	2,162	16	88	...	...	...
Furniture, Bedding, and Upholstery	29,269	38	218	126	49	...	...	...	165	98	43	...	...	...
Drugs, Chemicals, and By-products	96,114	34	492	147	81	...	...	...	465	89	78	...	...	...
Surgical and other Scientific Instruments	2,260	6	4	3	5	...	...	...	4	3	5	...	...	...
Jewellery, Timepieces, and Plated Ware	11,353	15	15	21	39	...	26	...	10	14	33	...	15	...
Heat, Light, and Power	1,486,891	112	29,570	619	24	50	...	4,106	23,360	457	18	25	...	3,731
Leatherware, N.E.I.	4,751	7	20	47	1	...	...	...	13	39	1	...	...	...
Minor Wares, N.E.I.	14,317	24	79	73	14	...	4	...	76	51	12	...	2	...
Total	7,919,948	2,326	81,567	4,638	4,780	172	302	4,217	62,449	3,463	3,682	115	217	3,810

Some explanation is necessary in connection with these figures. Although electrical power is shown in the table just given, it is excluded from consideration in the figures quoted in this chapter, as it is usually dependent on steam-engines for its development, and the power has already been credited to their agency. The value of machinery and plant includes not only the machinery and engines of which the horse-power is shown, but also all other tools and implements used in the various processes of manufacture, as well as the conveyance plant. The most powerful machinery is used in the supply of heat, light, and power, in the manufacture of metals, and in the preparation of foods and drinks, while in the clothing industries machinery enters into use only to a minor degree.

The power of machinery in average use increased from 33,253 horse-power in 1896 to 70,054 horse-power in 1905, while the value of the machinery and plant in these years was £5,035,905 and £7,919,948 respectively; so that in this respect alone there is now an additional investment of capital to the extent of nearly £3,000,000.

CAPITAL INVESTED.

The capital invested in the manufacturing industry may be divided into two classes, fixed capital and active capital. Fixed capital represents the amount invested in lands, buildings, machinery and plant, tools and implements of trade, and good-will. Active capital includes the value of raw material and fuel on hand, stock in process of manufacture, finished products on hand, bills receivable, ledger accounts, cash in hand, and sundries not elsewhere included. The approximate amount of fixed capital can be readily ascertained, for at the Census of 1901 information was obtained as to the value of land and buildings occupied for manufacturing purposes, while the value of machinery and plant, implements and tools of trade, is obtained each year. The active capital can only be estimated, and there are many difficulties to be overcome in preparing an estimate of the amount. From the data at command, however, it would appear that the average amount is about £7,500,000, but this estimate is advanced with the utmost diffidence, as it is apparent that the active capital is liable to great fluctuation, and the question is so complicated with different elements that it is almost impossible to arrive at a result which is satisfactory from a statistical point of view. It may be mentioned that in the United States, where complete information on this subject is obtained, the active capital in 1901 represented 48·8 per cent. of the whole invested capital; in New South Wales the proportion is only 36·8 per cent., but the difference is not incompatible with the degree of development in the two countries.

The value of land and buildings, as ascertained at the census of 1901, was £4,970,000, and of machinery, plant, &c., in 1905, was £7,920,000, so that the fixed capital amounted to £12,890,000. Assuming the active capital to be £7,500,000, as already shown, the total capital invested in manufactories represents a sum of £20,390,000.

The value of the land and buildings, machinery and plant, &c., in each industry is shown in the following table, which also contains some interesting information for the year 1905 regarding the value of materials used, and the value of goods manufactured or work done:—

Class of Industry.	Value of—						
	*Lands, Buildings, and Fixtures. (1901 figures.)	Machinery, Implements, and Conveyance Plant.	Rent Paid. (1901 figures.)	Materials used.	Fuel consumed.	Wages Paid.	Goods Manufactured or Work Done.
	£	£	£	£	£	£	£
I. Treating Raw Materials, product of Pastoral pursuits, &c.	204,204	217,957	6,884	†2,845,445	19,004	175,616	3,321,516
II. Oils and Fats, Animal, Vegetable, &c.	140,458	153,033	2,015	362,559	7,803	43,548	548,239
III. Processes in Stone, Clay, Glass, &c.	208,637	398,957	6,222	113,556	73,213	284,363	649,216
IV. Working in Wood	223,541	376,665	13,081	964,989	17,964	378,057	1,628,000
V. Metal Works, Machinery, &c.	864,975	1,529,901	18,231	3,274,480	225,585	1,378,651	6,282,061
VI. Connected with Food, Drink, &c.	1,765,882	2,505,353	33,967	5,880,890	89,858	793,193	8,109,235
VII Clothing and Textile Fabrics and Materials	151,332	260,206	49,750	1,531,782	9,486	821,918	2,830,795
VIII. Books, Paper, Printing, and Engraving	107,766	627,287	29,120	427,453	10,042	519,191	1,285,491
IX. Musical Instruments	12,000	5,275	536	39,359	257	29,328	94,415
X. Arms and Explosives	880	290	72	2,072	7	765	3,620
XI. Vehicles and Fittings, Saddlery, Harness, &c.	75,904	38,004	12,764	190,486	4,118	154,510	451,855
XII. Ship and Boat Building, &c.	561,250	162,065	749	76,420	5,429	156,616	261,229
XIII. Furniture, Bedding, and Upholstery	49,128	29,269	10,243	224,354	1,363	141,352	454,620
XIV. Drugs, Chemicals, and By-products	32,051	96,114	1,185	180,750	4,375	54,156	384,225
XV. Surgical and other Scientific Instruments	250	2,260	1,146	3,123	105	6,180	14,153
XVI. Jewellery, Timepieces, and Plated Ware	....	11,353	1,448	33,605	373	30,219	82,683
XVII. Heat, Light, and Power	535,655	1,486,891	2,010	223,237	84,552	184,856	1,047,176
XVIII. Leatherware, N.E.I.	21,850	4,751	144	45,960	277	10,915	70,466
XIX. Minor Wares, N.E.I.	13,935	14,317	1,695	78,798	834	27,916	133,431
Total	4,969,698	7,919,948	191,262	16,499,308	554,665	5,191,350	27,652,426

* If property of occupier. † Including value of wool treated.

VALUE OF PRODUCTION FROM MANUFACTORIES.

In stating the value of production from manufactories, the returns from factories dealing with milk products are not taken into consideration, as they have already been included in the value of production from the dairying industry.

It will be seen that the value of goods manufactured or work done in 1905 amounted to £27,652,426. Of this amount, £17,053,973 represents the value of materials and fuel used, leaving a balance of £10,598,453—the value added by the processes of treatment, which is the real value of production from manufactories. The sum last mentioned includes wages to the amount of £5,191,350, so that the actual amount which accrued to the proprietors was £5,407,103. It is interesting to note the proportions of the total output which the various items represent, and they are, therefore, shown in the following table:—

Item.	Amount.	Proportion of total.
	£	per cent.
Value of materials used	16,499,308	59·7
Value of fuel used	554,665	2·0
Wages paid	5,191,350	18·8
Balance which accrued to proprietors	5,407,103	19·5
Value of goods manufactured or work done	27,652,426	100·0

From this it will be seen that out of every hundred pounds worth of goods produced in factories, materials and fuel used in the manufacture thereof represented about £62, while the employees received nearly £19 and the proprietors between £19 and £20. There are, of course, numerous other sources of expense, in addition to those quoted above, and the balance shown as accruing to proprietors by no means represents the actual profits. A considerable margin must be allowed for such items as renewal of, and depreciation in, plant and machinery, &c., insurance, rent (where the buildings are not owned by the manufacturers), advertising, rates, taxes other than duty or income tax, and, in addition, a sum to cover the interst on invested capital; the balance being the actual reward of the manufacturers' exertions.

Pursuing the investigation still further, it will be seen from the following table that the proportions of the items vary considerably in the different classes of industries:—

Class of Industry.	Proportionate Value of Manufactured Goods represented by—			
	Materials.	Fuel.	Wages.	Balance Accruing to Proprietors.
	Per cent.	Per cent.	Per cent.	Per cent.
I. Treating Raw Materials, Product of Pastoral Pursuits, &c.	85·67	·57	5·29	8·47
II. Oils and Fats, &c.	66·13	1·43	7·94	24·50
III. Processes in Stone, Clay, Glass, &c.	17·49	11·28	43·80	27·43
IV. Working in Wood	59·28	1·10	23·22	16·40
V. Metal Works, Machinery, &c.	52·12	3·59	21·95	22·34
VI. Connected with Food and Drink, &c.	72·52	1·11	9·78	16·59
VII. Clothing and Textile Fabrics, &c.	54·11	·34	29·03	16·52
VIII. Books, Paper, Printing, and Engraving	33·25	·78	40·39	25·58
IX. Musical Instruments, &c.	41·69	·28	31·06	26·97
X. Arms and Explosives	57·24	·19	21·13	21·44
XI. Vehicles, Saddlery, and Harness, &c	42·16	·91	34·19	22·74
XII. Ship and Boat Building, Repairing, &c	29·25	2·08	59·95	8·72
XIII. Furniture, Bedding, Upholstery, &c	49·35	·30	31·09	19·26
XIV. Drugs, Chemicals, and By-products	47·04	1·14	14·10	37·72
XV. Surgical and other Scientific Instruments	22·07	·74	43·67	33·52
XVI. Timepieces, Jewellery, and Plated Ware	40·64	·45	36·55	22·36
XVII. Heat, Light, and Power	21·32	8·07	17·65	52·96
XVIII. Leatherware, N.E.I.	65·22	·39	15·49	18·90
XIX. Minor Wares, N.E.I.	59·06	·62	20·92	19·40
	59·67	2·01	18·77	19·55

The table discloses some curious results, and shows that so far as two classes of industries were concerned—those engaged in treating raw pastoral products, and in ship building and repairing—the year's operations could hardly have been profitable to the proprietors. Investigation proves that such was actually the case, for the results in these industries were the most unfavourable that have been experienced for some years.

It is interesting to note the extent to which the value of materials is added to by the processes of treatment. For all industries, materials averaged 60 per cent. of the value of the output; but there was great diversity amongst the various classes, and the proportion ranged from 17 per cent. in those industries engaged in processes in stone, clay, glass, &c., and power, to 86 per cent. in those treating raw pastoral products. These variations can be easily understood when the wide difference between the operations of the industries is considered, and the value of the plant employed is taken into account. The extensive use of machinery, however, is not always the chief factor controlling the value added to materials, and the industries dealing with food, &c., and those engaged in shipbuilding, &c., may be cited as an example. In the former class, materials represent 72 per cent. and wages only 10 per cent. of the total value, while in the latter class, the wages amount to twice the value of the materials used and represent 60 per cent. of the total cost.

The most striking example of the difference between hand and machine work is, however, afforded by the clothing industries. In establishments dealing with slop-clothing the materials represented 56 per cent. of the value of the output, and wages only 28 per cent; but in tailoring establishments, where the sewing is principally done by hand, the materials represented 39 per cent. and wages 37 per cent. of the value of the finished article. The general conclusion to be arrived at from the figures would appear to be that the quantity of skilled labour required in the manufacture of an article is the greatest factor in adding to the value of raw material.

The production from manufactories in 1905 represented a value of £7 3s. 4d. per head of population, an amount greatly in excess of the return for 1904, which was £6 16s. 11d. per head.

EMPLOYMENT AND PRODUCTION.

To obtain a fair approximation of the number of persons engaged in various walks of life is only possible at the Census, and even the particulars then obtained are not wholly satisfactory, as in many cases the number engaged in any particular industry cannot be ascertained owing to the vagueness of the replies. It is important that the occupations should be classified in as simple and systematic a manner as possible. The classification adopted in New South Wales and throughout Australasia generally is one drawn up for the Census of 1891, and adopted with a few minor modifications for use at the Census of 1901. By this method the people are divided into eight great classes, and these again into orders and sub-orders, according to the strict canons of scientific classification. The first seven classes include all breadwinners, and the eighth all dependents. The three great branches of workers are separated thus—all producers of raw materials, whether agricultural, pastoral, fishing, forest, or mining come together naturally in Class VI; all modifiers or makers in Class V; all distributors and sellers and transporters in Classes III and IV. Class I, which is called the Professional, includes those ministering to General and Local Government, Defence, Law and Order, to Religion, Charity, Education, Art, Science, and Amusement. All persons employed by the General and Local Government, whose occupations properly belong to the Producing, Industrial, or Commercial Classes, are included therewith, as the value of the classification is evidently the knowledge as to *how* these persons are employed, and not *by whom*. Class II, the Domestic, includes all persons supplying board and lodging, and performing domestic duties for which remuneration is paid. The classes may be briefly defined as follows:—

SECTION A.—BREADWINNERS.

Class.

I.—Professional.

II.—Domestic.

III.—Commercial.

IV.—Transport and Communication.

V.—Industrial.

VI.—Agricultural, Pastoral, Mineral, and other Primary Producers.

VII.—Indefinite.

SECTION B.—DEPENDENTS—NON-BREADWINNERS.

VIII.—Dependents.

The main object of the classification is to obtain the total number of workers in any capacity whatever in any particular industry or business, not only those directly related to the industry or business, but those holding subordinate positions who assist in its conduct, and who would not otherwise be in the same sub-order as the principal workers. The population distributed into the classes described above, and the proportion per cent. in each at the Census of 1901 were as follows:—

Classes.	Number.			Proportion per cent.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
I.—Professional	26,855	14,529	41,384	3·79	2·26	3·06
II.—Domestic	20,128	52,690	72,818	2·84	8·17	5·39
III.—Commercial	67,097	10,567	77,664	9·48	1·64	5·74
IV.—Transport and Communication.	42,822	1,045	43,867	6·05	·16	3·24
V.—Industrial	122,692	23,996	146,688	17·33	3·72	10·85
VI.—Primary Producers	168,212	4,642	172,854	23·75	·72	12·78
VII.—Indefinite	3,597	5,927	9,524	·51	·92	·70
Breadwinners	451,403	113,396	564,799	63·75	17·59	41·76
VIII.—Dependents	256,634	531,164	787,798	36·25	82·41	58·24
Occupation not stated	1,968	281	2,249	...	...	...
Total Population	710,005	644,841	1,354,846	100·00	100·00	100·00

It will be seen that the Dependents, both male and female, comprise the largest class, owing to the fact that children are included therein. Of the males following gainful pursuits, the greatest number are employed in primary pursuits, which comprise 23·75 per cent. of the population, those engaged in the Industrial Class, 17·33 per cent., come next, and then those in the Commercial Class, 9·48 per cent.

The number of manufactories is at present but small, and from the nature of things there is little demand for skilled workers. Of those in the Industrial Class over 27,000 are general labourers. Among females by far the largest proportion is in the Domestic Class; next comes the Industrial Class, which includes over 18,000 dressmakers and tailoresses.

BREADWINNERS AND DEPENDENTS.

The population of a country falls naturally into the two broad divisions, breadwinners and dependents, and from the above table it will be observed that at the Census of 1901, 564,799, or 41·76 per cent., of the population were breadwinners, and 787,798, or 58·24 per cent., were dependents. The proportions, however, differed widely in the two sexes, only 17·59 per cent. of the females being breadwinners, as against 63·75 per cent. of the males.

The term "dependent" is not altogether a happy one, seeing that under this designation are included married women and others who perform domestic duties; nevertheless it is justified on the ground that for such services no money-wages are paid. The dependents are divisible into four subdivisions, viz.:—(*a*) Persons employed in household duties without receiving wages;—of these there were 282,718 females, and only 128 males; (*b*) persons of tender years unable to earn their own livelihood;—of these there were 145,965 males and 145,441 females; (*c*) relatives and others not performing household duties;—of these there were 99,736 males and 97,336 females; and (*d*) persons dependent on charity, or under legal detention;—of these there were 10,805 males and 5,669 females. The persons performing household duties without receiving wages were chiefly the wives and daughters of breadwinners. The relatives and others not performing household duties were aged persons, the parents or grandparents of the breadwinners; and children beyond the school age. Under this last category were also included all persons under 20 years of age whose occupation was not returned.

Grouped in the two great divisions of breadwinners and dependents, and excluding those whose occupation was not recorded, the proportion of population in each class at each Census from 1861 to 1901 appeared as follows:—

Census Years.	Breadwinners.			Dependents.		
	Males.	Females.	Total.	Males.	Females.	Total.
1861	67·58	19·07	46·46	32·42	80·93	53·54
1871	63·19	16·01	41·67	36·81	83·99	58·33
1881	64·37	16·29	42·61	35·63	83·71	57·39
1891	63·13	17·36	42·09	36·87	82·64	57·91
1901	63·75	17·59	41·76	36·25	82·41	58·24

These figures show very little change in the division of the population. In 1861 the high proportion of breadwinners was due to the small number of young persons. In the later years the greater proportion of dependents was largely due to the increased number of the aged.

PRIMARY PRODUCERS.

It has already been observed that the largest part of the population is employed in primary pursuits. The following statement shows the various branches of primary industries followed at the Census of 1901. For comparative purposes, the Census figures of 1891 are also shown, that being the first year when reliable particulars relating to occupations were obtained:—

Engaged in	1891.		1901.	
	Males.	Females.	Males.	Females.
Agriculture	66,483	7,022	75,864	1,735
Pastoral Pursuits	27,212	334	31,312	595
Dairying	4,996	4,758	15,850	2,285
Mining	30,936	1	38,378	4
Forests	1,653	......	2,431	1
Fisheries	793	......	1,238	3
Other Primary Pursuits.	2,773	3	3,119	19
Total	134,846	12,118	168,212	4,642

Agriculture claims the largest number of followers; then mining, pastoral, and dairying pursuits. The rural industries are the most important to any State, and the following statement shows at each Census from 1871 to 1901 the number and proportion of the whole population engaged in primary pursuits:—

Census.	Number.			Proportion of whole Population.
	Males.	Females.	Total.	
				Per cent.
1871	81,431	8,027	89,458	17·95
1881	96,091	8,905	104,996	14·09
1891	134,846	12,118	146,964	13·11
1901	168,212	4,642	172,854	12·78

It will be seen that the decrease in the proportion from 1891 to 1901 was due to the decrease in the number of females employed. The number of women engaged in agricultural and dairying pursuits varies with the time of the year. Besides the 1,735 women shown as employed in agriculture at the Census of 1901, there were some 2,500 others employed partly in connection with agriculture, and partly in domestic duties. The majority of these were relatives of the farmers, and appear in the classification as engaged in domestic duties, and therefore as dependents. Similarly, some 10,000 women who were engaged partly in dairying and partly in domestic duties are classified as performing domestic duties. If the women partly employed in agriculture and dairying be included with those mainly so employed, the total women engaged in agriculture would be 4,267, and in dairying 12,156.

THE INDUSTRIAL CLASS.

The persons engaged in industrial pursuits numbered 146,688, and of this number 94,119 were employed in manufacturing. The following table shows the numbers employed in the different branches of industry, and for purposes of comparison similar information is given for the year 1891:—

Engaged in—	1891.		1901.	
	Males.	Females.	Males.	Females.
Manufacture of Art and Mechanic Productions	23,108	623	26,346	1,157
Manufacture of Textile Fabrics, Dress, and Fibrous Materials	7,709	16,892	9,451	21,644
Manufacture of Food, Drinks, Narcotics, and Stimulants	7,699	240	11,638	875
Manufacture, &c., of Animal and Vegetable Substances	5,193	7	5,546	50
Manufacture, &c., relating to Metals and Mineral Matters	12,082	8	15,336	60
Working in Fuel, Light, and other forms of Energy	1,639	......	2,012	4
Construction or repair of Buildings, Roads, Railways, &c.	37,590	2	36,898	11
Disposal of the Dead or of Refuse	386	5	1,278	15
Industrial Workers imperfectly defined	23,642	42	14,187	180
Total, Industrial Class	118,998	17,819	122,692	23,996

The largest number in the industrial class is employed in the construction or repair of buildings, railways, &c. Of the males in the manufacturing branches, the number engaged in art and mechanic productions is the largest; this order includes 5,432 working in engineering and iron works, 4,641 in books and printing, and 4,206 in building materials and other manufactures of timber. Practically all the females are engaged in the manufacture of textile fabrics, dress and fibrous materials, although a small number is employed in connection with bookbinding and printing.

THE COMMERCIAL CLASS.

The persons engaged in commercial callings numbered 77,664, of whom 66,299 were engaged in trade. The persons engaged in the various branches of trade at the Census of 1891 and 1901 are shown below:—

Dealing in—	1891.		1901.	
	Males.	Females.	Males.	Females.
Art and Mechanic Productions	2,602	226	4,144	564
Textile Fabrics and Dress and Fibrous Materials	4,965	857	6,957	2,269
Food, Drinks, Narcotics, and Stimulants	12,720	1,066	19,522	2,581
Animals, and Animal and Vegetable Substances	3,313	59	5,984	154
Coal and other substances mainly used for Fuel and Light	1,339	10	2,084	25
Minerals other than for Fuel and Light	1,503	26	2,136	60
Mercantile Pursuits not elsewhere classed	16,587	1,887	16,689	3,130
Total engaged in Trade	43,029	4,131	57,516	8,783

The sale of food, drink, &c., gives employment to most persons in this class, and the increase from 1891 to 1901 among those so employed was large. Those dealing in textile fabrics, &c., chiefly drapers, came next, and then those dealing in animal and vegetable substances. The other groups are comparatively small. The last group includes many persons who were so imperfectly defined that they could not be classed elsewhere.

The persons engaged in all branches of commerce were as follows:—

Engaged in—	1891.		1901.	
	Males.	Females.	Males.	Females.
Finance and Property	7,262	650	8,985	1,783
Trade	43,029	4,131	57,516	8,783
Chance Events	233	......	424	......
Storage	313	1	172	1
Total, Commercial Class	50,837	4,782	67,097	10,567

TRANSPORT AND COMMUNICATION.

This class embraces all persons engaged in the transport of passengers or goods, or in effecting communication. The number so employed in 1891 and 1901 was as follows:—

Engaged in—	1891.		1901.	
	Males.	Females.	Males.	Females.
Railway Traffic (not construction)	7,114	143	9,493	238
Road Traffic (including Tramways)	12,256	24	13,050	56
Sea and River Traffic and the regulation thereof	10,456	57	15,318	107
Postal Service	1,875	253	2,644	517
Telegraph and Telephone Service	1,598	22	1,789	127
Delivery of Documents, Parcels, and Messages by hand	909	1	528	......
Total, Transport and Communication	34,208	500	42,822	1,045

The persons engaged in railway and tramway traffic are practically all Government employees, as private railways only employed 218 men in 1901. The number included in the second group, as working in connection with tramways, in 1901, was 2,226. Among those engaged in sea and river traffic in 1901 were 4,929 wharf labourers.

THE DOMESTIC CLASS.

The Domestic Class embraces all persons employed in the supply of board and lodging, and in rendering personal services for which remuneration is usually paid. The numbers in each branch in 1891 and 1901 were as follows:—

Engaged in—	1891.		1901.	
	Males.	Females.	Males.	Females.
Supply of Board and Lodging	7,777	10,132	8,258	15,622
Domestic Service and attendance (for which remuneration is paid)	9,927	28,117	11,870	37,068
Total, Domestic Class	17,704	38,249	20,128	52,690

This class comprises the largest number of females, and includes nearly one-half the total number of female breadwinners. Among those engaged in the supply of board and lodging in 1901 were 15,326 hotelkeepers and servants, and 6,088 boarding-house keepers and servants. The second group included 33,904 house servants and 4,043 laundry workers and washerwomen.

THE PROFESSIONAL CLASS.

The persons in this class comprise those engaged in the Government and defence of the country, and in satisfying the moral, intellectual, and social wants of its inhabitants. The numbers engaged in these directions at the Census of 1891 and 1901 were as follows:—

Engaged in—	1891.		1901.	
	Males.	Females.	Males.	Females.
General Government	1,185	6	1,545	31
Local Government	265	7	349	5
Defence	1,237	......	3,511	......
Law and Order	4,564	84	5,404	74
Religion, Charity, Health	4,015	3,027	5,580	4,817
Education, Art, Science	9,920	7,293	10,466	9,602
Total, Professional Class	21,186	10,417	26,855	14,529

It should be pointed out that the number shown as employed by the General Government does not represent the whole number in its service. As explained previously, the principle of the classification is to include Government employees in the orders to which they are most nearly related. The total number of those in the Government service in 1901 was about 32,000.

A very general idea may be obtained from the preceding pages of the changes which have taken place, in the direction of labour, during the ten years from 1891 to 1901. But a better idea, perhaps, of the way in which labour has moved will be obtained from the following statement, which shows at the two periods mentioned the proportion of males per 1,000 breadwinners, following each of the specified occupations, which are those employing most men in New South Wales:—

Occupation.	Males per 1,000 Breadwinners.	
	1891.	1901.
Supply of board and lodging	20	18
Domestic service and attendance	26	26
Engaged in finance and property	19	20
Dealers in textile fabrics, dress, &c.	13	15
Dealers in food, drinks, narcotics, &c.	33	43
Makers of art and mechanic productions	60	58
Makers of textile fabrics, dress, &c.	20	21
Makers of food, drinks, narcotics, &c.	20	26
Workers in metals and minerals	31	34
Construction of houses and buildings	62	52
Agricultural pursuits	174	168
Pastoral pursuits	71	69
Dairying pursuits	13	35
Mining pursuits	81	85

The above table shows that the number of males working in connection with food, drinks, &c., both as makers and sellers increased largely, and that in conjunction therewith the number of those engaged in dairy-farming also greatly extended. The number of workers in metals and minerals increased slightly, but those engaged in agricultural and pastoral pursuits, and in the building trades, declined.

GRADES OF OCCUPATIONS.

For purposes of comparison, and in order to distinguish the masters from the men, breadwinners were divided into five grades, viz.:—(*a*) Employers of outside labour; (*b*) persons engaged on their own account, but not employing others for salary or wages; (*c*) relatives assisting in a business, but not receiving salary or wages who, nevertheless, are breadwinners; (*d*) wage-earners; and (*c*) unemployed. It was, however, found necessary to record those to whom the grade in the Census schedule was not applicable, besides those who neglected to state whether they were employed or not.

The total number of the people in 1901, classified according to these grades, was as follows:—

Grade.	Males.	Females.	Persons.
Employers	48,920	4,933	53,853
Persons working on their own account	65,577	16,780	82,357
Relatives assisting	17,635	6,077	23,712
Wage-earners	290,203	72,190	362,393
Persons to whom classification according to grade does not apply	264,910	540,911	805,821
Unemployed	21,110	3,639	24,749
Not specified	1,650	311	1,961
Total	710,005	644,841	1,354,846

The employers, which term does not include mistresses of domestic servants, numbered 53,853. Wage-earners comprised 362,393 persons, and if from these be deducted those engaged in purely domestic service, Government employees, and the naval and military members of the community, it will be found that there must have been a large number of small employers. The average ratio of employers to workers was about 1 to 6.

The persons working on their own account were exceedingly numerous, comprising 82,357, and were especially so among the farming classes and among those following commercial pursuits and engaged in transport. The relatives returned as assisting do not form a very numerous class. They are found engaged mainly in agricultural and pastoral pursuits. The unemployed numbered 24,749, or about 4½ per cent. of total breadwinners. At the Census a person was directed to return himself as unemployed if he had been out of work for more than a week immediately prior to the Census—cases of leave of absence were excepted. Of the unemployed males, 2,753 were out of work through sickness, and 1,656 through old age, while the remaining 16,701 could not be placed under either of these heads.

The proportion per cent. of breadwinners of each sex belonging to each grade in 1901 was as shown below. The proportions in 1891, the first year in which this information was obtained, are also shown:—

Grade.	1891.		1901.	
	Males.	Females.	Males.	Females.
Employer	14·0	3·0	10·9	4·3
Engaged on own account	13·0	15·8	14·5	14·8
Relative assisting	2·3	8·4	3·9	5·4
Wage-earner	64·2	61·3	64·3	63·7
Not applicable	1·7	8·4	1·8	8·6
Unemployed	4·8	3·1	4·6	3·2
Total	100·0	100·0	100·0	100·0

AGES OF WORKERS.

The chief interest attaching to the record of the ages of the workers is the light it throws upon the employment of young persons. Of the male breadwinners rather less than one-sixth were under the age of 20 years; while of the female breadwinners about one-fourth were under that age. Of the whole population under 20, more than four-fifths were dependents. The following table gives the number of breadwinners of each sex in various age-groups, their proportion per cent. to the total number in each group, and the proportion of each group to the total number of breadwinners:—

Age Groups.	Number of Breadwinners.		Proportion per cent. of total in each group.		Proportion per cent. of total Breadwinners.	
	Males.	Females.	Males.	Females.	Males.	Females.
Under 15	9,142	2,785	3·72	1·16	2·03	2·46
15—19	61,963	26,381	87·99	37·29	13·80	23·30
20—24	61,268	24,784	98·64	38·26	13·64	21·89
25—44	202,152	38,740	98·39	21·81	45·02	34·22
45—64	92,076	15,358	97·42	21·67	20·50	13·56
65 and over	22,496	5,181	84·07	26·57	5·01	4·57
Not stated	2,306	167	......	......	......	......
Total	451,403	113,396	63·75	17·59	100·00	100·00

Under the age of 15, less than 4 per cent. of males and about 1 per cent. of females are breadwinners. Between 15 and 20 the number of workers increases rapidly. Between 20 and 25 the largest proportion of breadwinners in both sexes is found. Among males the proportion of breadwinners does not vary greatly between 20 and 65, but after 65 the number of breadwinners falls away. The largest proportions of female breadwinners are between 15 and 25. After 25 more women are married and the proportion decreases. The increase in the number of female breadwinners after 65 is more apparent than real, being due to the large number, probably widows, included therein who are proprietors of houses and land or are of independent means.

The statement below shows for males the proportion per 1,000 in each age-group who were dependents or breadwinners, the latter being divided into primary producers, industrial workers, and all others :—

Age-group.	Breadwinners (Males).				Dependents.
	Primary Producers.	Industrial Workers.	All Others.	Total.	
Under 15	16	9	12	37	963
15—19	338	260	282	880	120
20—24	365	268	353	986	14
25—44	345	273	366	984	16
45—64	384	262	328	974	26
65 and over	378	172	290	840	160
All ages	238	173	227	638	362

The proportion of primary producers is about the same at all ages from 15 to 65. Among industrial workers and all others a maximum is reached between 25 and 45. The smallest proportion of industrial workers is at ages 65 and over, and of other workers at the extreme ages from 15 to 20 and over 65. The lowest proportion of dependents is at ages between 20 and 25, after which it rises slowly to age 65, and then increases largely.

The next statement shows the proportion of females per 1,000 in each age-group who are dependents and breadwinners, the latter being divided into those in the domestic class, and all others :—

Age-group.	Breadwinners (Females).			Dependents.
	Domestic Class.	All Others.	Total.	
Under 15	8	4	12	988
15—19	191	182	373	627
20—24	197	186	383	617
25—44	101	117	218	782
45—64	80	137	217	783
65 and over	47	219	266	734
All ages	82	94	176	824

At ages from 15 to 25, women in the domestic class are more numerous than all other workers put together, and from 25 to 45 the difference is not great. After 45 the number of domestics falls away largely. The proportion of dependents is at a minimum at ages between 20 and 25, after which it increases up to age 65, and then declines.

WAGES.

The "Wealth and Progress of New South Wales" for 1897-8 contains an account of the industrial progress of the State from the earliest period to which the records extend up to 1897. As this information is readily accessible, and no new facts have been discovered bearing upon the subject treated, the reader is referred to that work. It will, however, be well to record the variation of wages from the year 1893.

The period from 1880 to 1887 was, perhaps, the brightest in the State, as at no period, except in the five golden years, 1853-57, were wages so high, and at no period was the purchasing power of money so great. Up to the end of 1891 there was little reduction in the nominal rate of wages in skilled trades, though for unskilled labour the rates experienced a decided decline. In 1893 there was a heavy fall all round, and the second half of that year marks the beginning of a new industrial period under vastly changed conditions. It is idle to speculate as to what would have been the course of industrial history had the banking crisis of 1893 not occurred. It may, however, be mentioned that wages had shown signs of falling before the suspensions took place. Between the first and second half of 1893 there was a fall of about 10 per cent. in the wages of mechanics, and a somewhat greater fall in the wages of unskilled labourers. In 1894 there was no further fall, but employment became more restricted. In 1895, however, there was a still further decline, the wages of the year averaging for skilled workmen 22 per cent. below the rates of 1892, and for unskilled labourers about 17½ per cent. During 1896 wages in several trades rose, and since then there have been some further advances, and generally more regular employment than at any time since the bank crisis. In 1898, 1899 and 1900, employment in the building trades was plentiful, and the wages of masons, bricklayers, and allied trades rose to a point which they had not reached since 1889.

During the period under review there was a stoppage of nearly all forms of speculative activity; on the other hand, there was a marked extension of agriculture and important mining developments. The following were the average wages for the more important trades:—

Trade or Calling.	1893 (second half) and 1894.		1895.		1896.		1897.		1898.		1899.		1900.	
Males, per day, without board and lodging.														
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
Carpenters	9	6	8	0	8	0	8	6	9	0	9	0	9	6
Blacksmiths	8	0	6	8	8	6	9	0	9	0	8	6	9	0
Bricklayers	9	6	8	6	9	0	9	0	9	0	9	8	11	0
Masons	8	6	7	8	9	0	9	0	9	0	10	3	11	0
Plasterers	8	6	7	0	7	0	8	0	8	0	8	6	9	6
Painters	8	0	7	0	7	0	8	0	8	0	7	0	9	0
Boilermakers	9	0	8	0	8	6	10	0	10	0	10	1	10	3
Labourers and navvies	6	0	6	0	6	0	6	0	6	6	6	9	6	10
Males, per week, with board and lodging.														
Farm labourers	12	6	12	6	12	6	13	6	14	0	13	6	16	3
Females, per week, with board and lodging.														
Housemaids	10	0	10	0	10	0	11	0	11	0	11	6	11	3
Laundresses	14	0	14	0	14	0	15	0	15	0	18	6	18	9
Nursemaids	7	6	7	6	7	6	7	6	7	6	7	0	7	0
General servants	11	6	11	6	11	6	11	6	11	6	11	0	11	0
Cooks	14	0	14	0	14	0	14	0	15	0	20	0	20	0

The beginning of the new century saw the birth of the Australian Commonwealth, and there is no doubt that the federation of the States gave greater opportunities both to capital and labour, and thus led to increased production. At the close of the year 1901 also, the Industrial Arbitration Act was passed, and under the awards of the Court many industrial workers now enjoy a fixed hourly or daily wage. With these advantages, and the beneficial influence exerted by good seasons, it is not surprising to find that wages have been well maintained; the rate for unskilled labour having risen to 7s. per day, as shown in the following table:—

Trade or Calling.	1901.		1902.		1903.		1904.		1905.		1906.	
Males, per day, without board and lodging.												
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
Carpenters	10	0	9	6	9	6	9	0	9	4	10	0
Blacksmiths	9	0	9	0	9	0	9	0	10	0	10	0
Bricklayers	11	0	11	0	11	0	11	0	11	0	11	0
Masons	11	0	11	0	11	0	11	0	11	0	11	0
Plasterers	10	0	10	0	10	0	10	0	10	0	10	0
Painters	9	0	9	0	9	4	9	4	9	4	9	4
Boilermakers	10	4	10	3	10	3	10	3	10	3	10	3
Labourers and navvies	6	10	7	0	7	1	7	1	7	0	7	0
Males, per week, with board and lodging.												
Farm labourer	17	6	16	0	16	0	16	0	16	0	15	0
Females, per week, with board and lodging.												
Housemaids	12	6	12	6	12	0	12	0	12	0	12	0
Laundresses	17	6	17	6	17	6	15	0	18	0	20	0
Nursemaids	7	0	11	0	11	0	10	0	10	0	10	0
General servants	14	0	14	0	13	0	10	0	15	0	15	0
Cooks	22	6	22	6	19	0	17	0	17	0	17	0

TRADE UNIONS.

Under the "Trade Union Act of 1881," the term "Trade Union" is defined to mean "any combination, whether temporary or permanent, for regulating the relations between workmen and employers, or between workmen and workmen, or between employer and employers, for imposing restrictive conditions on the conduct of any trade or business, whether such combination would or would not, if this Act had not been passed, have been deemed to. have been an unlawful combination by reason of some one or more of its purposes being in restraint of trade."

After the passing of the Act of 1881, the advantages of registration were seen by the existent unions, and on an average about ten unions per annum applied for enrolment during the first eight years. In 1890 the State experienced great industrial disturbances, and the trades were roused to great activity, so that during the next two years 59 unions came into existence, 38 in 1890, and 21 in 1891. The force of the movement had then, however, spent itself, and during the nine years, ended 1900, only 30 new bodies sought registration. In 1901 the Industrial Arbitration Act was passed, with the consequence that the unions once more became active, and during the four years 1901 to 1904, no less than 116 new unions were formed. The total number of unions formed up to the end of 1905 was 292. Of these there were on that date 137 or 47 per cent. in existence, and 155 or 53 per cent. had disappeared by amalgamation, cancellation, or dissolution. It may be mentioned that out of 125 unions formed during the last six years, 35 have already disappeared. The average duration of the extinct unions was 9 years, and of the existent unions about 7 years.

The unions in existence at the end of 1905 are classified as follows, according to the industries or callings to which they are related:—

Calling.	No. of Unions.	Calling.	No. of Unions.
Mining	17	Building trades	14
Pastoral	2	Engineering and iron trades	9
Shipping and sea transport	11	Other manufacturing	25
Railways	6	Others	17
Other land transport	8		
Food and drink	17	Total	137
Clothing	11		

The largest unions were the Australian Workers' Union (Pastoral), with over 17,800 members, the Colliery Employees' Federation, with 5,700, and the Amalgamated Railway and Tramway Association, with 4,600.

The following statement shows the position of the unions at the end of 1904 and 1905, as regards finances and membership:—

	1904.	1905.
Number of Unions existent, end of year	152	137
,, ,, returning membership	131	137
,, ,, ,, financial statement	134	137
,, ,, supplying no return	18	......
Total income	£82,109	£72,576
Total expenditure	£78,752	£67,611
Membership	79,815	84,893
Income per member	19s. 0d.	17s. 1d.
Expenditure per member	18s. 6d.	15s. 11d.
Amassed funds per member	17s. 3d.	17s. 3d.

INDUSTRIAL UNIONS.

For the purposes of the Industrial Arbitration Act, passed on the 10th December, 1901, industrial unions of either employers or employees may be formed. The employment of not less than fifty persons entitles an employer or group of employers to registration, and a trade union or association of trade unions is entitled to registration as an industrial union of employees. For further information, however, on industrial arbitration, the reader is referred to an article thereon, by Mr. G. C. Addison, Registrar of the Industrial Arbitration Court, which appears later on in this volume. The following statement shows, during the five years the Act has been in force, the membership of the registered unions, both employers and employees:—

Year.	Employers' Unions.	Employees' Unions.
	Membership.	Membership.
1902	2,302	58,203
1903	2,916	68,510
1904	3,204	71,031
1905	3,343	78,472
1906	3,044	84,015

IMPORTATION OF LABOUR.

Since the cessation of assisted immigration by the State there has been very little labour imported by the capitalists and manufacturers; in fact, almost all the artisans and labourers who have arrived here within the last few years have been those who have left the other Australasian provinces in the hope of improving their position in New South Wales.

Under the Commonwealth Immigration Restriction Act of 1901, the immigration of persons under a contract or agreement to perform manual labour within the Commonwealth was prohibited, except in the case of those exempted by the Minister for special skill required in Australia. But under the Contract Immigrants Act of 1905, any contract immigrant may land in Australia if the terms of the contract have been previously approved by the Minister for External Affairs. Contract immigrants are now only prohibited if, in the opinion of the Minister, the remuneration and other conditions of employment in the contract are not as advantageous to the immigrant as those current for workers of the same class at the place where the work is to be performed, or if the contract is made in contemplation of or with the view of affecting an industrial dispute.

PRODUCTION FROM ALL INDUSTRIES.

In other chapters of this work details have been given of the various producing industries, and in the following table they have been grouped together so that a clear idea may be gathered of their relative importance in adding to the national wealth. To extend the comparison further, the figures for the last two years are shown in conjunction.

As previously stated, the figures show the actual value received by the producers at the place of production, and in the manufacturing industry they represent the value added to raw materials by the processes of treatment, not the value of articles manufactured or work done:—

Industry.	Value of Production.			
	1904.		1905.	
	Total.	Per head of Population.	Total.	Per head of Population.
	£	£ s. d.	£	£ s. d.
Manufacturing and allied processes	9,900,000	6 16 11	10,598,000	7 3 4
Agriculture	5,414,000	3 14 10	6,543,000	4 3 6
Dairying	2,753,000	1 18 1	3,123,000	2 2 3
Pastoral industry	13,373,000	9 4 11	17,113,000	11 11 6
Mineral production	6,243,000	4 6 3	6,897,000	4 13 4
Forestry and fisheries	900,000	0 12 5	1,190,000	0 16 1
Minor industries (poultry, bees, rabbits, &c.)	799,000	0 11 1	1,228,000	0 16 7
Total	39,382,000	27 4 6	46,692,000	31 11 7

The total value of production during 1905 was, therefore, no less than £46,692,000, a truly remarkable return from a population of a million and a half under any conditions, but still more so when it is considered that so recently as 1903 a large portion of the country was in the grip of a severe drought. The figures are far in advance of those for any former year, being £7,310,000 in excess of 1904, and it is especially gratifying to note that the increase is general throughout all industries. It will be seen that the pastoral industry is by far the most important item in the wealth and production of the State, and in 1905 gave a return equal to £11 11s. 6d. per head of population. The manufacturing industry occupied second place, with £7 3s. 4d. per head.

The following table shows the total value of production in various years from 1871 onwards, together with the return per head of population:—

Year.	Value of Production.	Value per head of Population.
	£	£ s. d.
1871	15,379,000	30 5 3
1881	25,180,000	32 18 3
1891	36,740,000	32 3 5
1901	38,954,000	28 7 10
1904	39,359,000	27 4 3
1905	46,692,000	31 11 7

These figures show that since 1871 the volume of production has increased by over 31 millions, and the value per head of population by £1 6s. 3d. From the primary industries alone the return in 1905 was £36,094,000, equal to £24 8s. 3d. per head, or what is perhaps a better standard, £116 3s. 5d. per square mile. This is the highest return yet received from the primary industries, and affords incontrovertible testimony to the wonderful recuperative powers of the State, and the bountiful returns which it yields under favourable conditions. The figures are unsurpassed by any country outside Australasia, and explain the reason why the State is enabled to bear so easily its relatively great indebtedness.

FOOD AND PRICES.

Food Supply.

The soil of New South Wales is capable of producing in abundance most of the things essential for the sustenance of human life, and so far as actual necessaries are concerned the State is practically independent of outside assistance, and in fact is in a position to export them. Considering the comparatively high rate of wages which prevails, food of all kinds is fairly cheap, and articles of diet which in other countries are almost within the category of luxuries are in New South Wales largely consumed even by the poorest classes.

The main articles of consumption in the State are meat and bread, the retail value of which exceeds 43 per cent. of the total expenditure on food.

The annual consumption of the principal articles of diet, based on the average of the last ten years, was as follows :—

Flour			235·8 lb.
Oatmeal			5·6 ,,
Rice			9·8 ,,
Meat	Beef Mutton Pork, &c.	146·4 lb. 99·5 ,, 12·6 ,,	258·5 ,,
Potatoes			173·3 ,,
Sugar			108·1 ,,
Butter			22·1 ,,
Cheese			3·6 ,,
Tea			7·0 ,,
Coffee			8·0 oz.
Cocoa and chocolate			12·0 ,,

The average consumption of wheat is nearly 6 bushels per head, so that about 9,000,000 bushels are now required for home consumption as food. The production in an ordinary year is not only sufficient to cover this but also to leave a large surplus for exportation after making a liberal allowance for the requirements for seed, &c.

Oatmeal, corn-flour, and rice are the only other articles of cereal produce largely consumed. Rice is not grown in the State, and the quantity required is imported either directly or indirectly from Japan, China, and India.

Oatmeal is extensively manufactured in the State, but there is no definite information as to the actual output, and it is probable that the consumption is slightly greater than the figures quoted.

The consumption of fresh meat is enormous, but is steadily decreasing. The high prices which prevailed a few years ago led to the substitution of vegetable foods, and a certain portion of the population did not revert to its former liberal consumption of animal food. In addition it may be remarked that although prices have again become normal, they are stimulated to a certain extent by the export trade, and have never reached their former low level.

In the matter of meat supply the State is almost independent of external assistance, and were it not that beef is preferred to mutton, there would be no necessity for the importation of stock. The requirements of the State for food alone amounted in 1905 to 320,000 head of cattle, and 2,613,000 head of sheep ; and large as these totals are, they are considerably below the average of previous years.

The swine slaughtered during 1905 numbered 289,096. The quantity of bacon and hams made, according to the returns collected, was 11,602,440 lb., and the quantity imported during the year was 3,989,582 lb. The annual consumption of pork and its manufactured products averages about 12·5 lb. per inhabitant.

The consumption of potatoes amounted in 1904 to about 2,500,000 cwt., but in 1905 it fell to 1,740,000 cwt., on account of the high prices which prevailed. As the local production is usually about 1,000,000 cwt. it will be seen to what a large extent the State is dependent upon the neighbouring provinces.

The consumption of sugar is enormous, averaging about 109 lb. per head during each year. A large part of the State is well adapted to the growth of sugar-cane, and during the four years ended with 31st March, 1899, the average area cut was over 15,000 acres. Since then, however, the area cut annually has not averaged 10,000 acres, as many of the farmers have abandoned sugar-growing in favour of dairy-farming. The local mills produced 20,100 tons of sugar in 1905, which is about equal to the average of the past six years, and as the total requirements of the State are about 65,000 tons an import of nearly 45,000 tons is necessary each year.

The consumption of butter is increasing, but this is not surprising in view of the great improvement in the quality of the article, and its comparative cheapness. The whole of the butter and most of the cheese used are of local manufacture, and almost every year sees an increase in the quantity exported. The butter required for local consumption now exceeds 39,000,000 lb. per annum, while 5,000,000 lb. of cheese are necessary.

Tea enters largely into consumption, the average being about 7 lb. per head; while the annual consumption of coffee is about half a pound per head.

The quantity of tobacco consumed in 1905 was 4,140,700 lb., the figure including tobacco, cigars, and cigarettes. This is equivalent to 2·80 lb. per inhabitant, and is above the average of 1904, which was 2·69 lb. per head. The consumption is gradually increasing; from 1895 to 1899, the average per head was just over 2½ lb., and from 1900 to 1904 not quite 2¾ lb. per head. The consumption in 1905 was as follows:—

Description.	Consumption of Tobacco, 1905.			Per head of Population.
	Imported.	Australian.	Total.	
	lb.	lb.	lb.	lb.
Tobacco	475,700	2,950,500	3,426,200	2·32
Cigars	104,100	85,000	189,100	·13
Cigarettes	38,900	486,500	525,400	·35
Total	618,700	3,522,000	4,140,700	2·80

The expenditure on tobacco in 1905 amounted to £1,284,000, or 17s. 7d. per head of population.

In regard to the description of tobacco used there has been a great change during recent years, a noticeable feature being the large increase in the consumption of cigarettes. In 1890 about 88 per cent. of the total consumption was of ordinary tobacco, in 1905 the proportion had fallen to 82·7 per cent.; of cigars the consumption was about 8·5 per cent., compared with 4·6 per cent. at present; and of cigarettes 3·1 per cent. in 1890, compared with 12·7 per cent. in 1905.

CONSUMPTION OF INTOXICANTS.

The consumption of alcohol is now about equal to the average of ten years ago, although some of the intervening years show a considerable increase, as will be seen from the following statement, which gives the average consumption of spirit per inhabitant during 1891, 1895, and each of the last ten years:—

	Gallons.		Gallons.
1891	2·84	1900	2·44
1895	2·09	1901	2·46
1896	2·12	1902	2·45
1897	2·17	1903	2·20
1898	2·22	1904	2·11
1899	2·27	1905	2·11

These figures represent the amount of alcohol contained in the liquor consumed; the quantities are given in proof spirit as being a measure more easily understood, if less scientific, than that of absolute alcohol.

In 1891 the consumption was 2·84 gallons per inhabitant, so that it will be seen there has been a considerable decrease since that year.

The volume of spirits consumed in the State during 1905 was 1,131,500 gallons, of which 127,600 gallons were Australian, and 1,003,900 gallons were imported.

The average consumption was 0·77 gallon per head, slightly below the average of the last five years, as will be seen from the following table:—

Year.	Consumption of Spirits.		Year.	Consumption of Spirits.	
	Total.	Per Inhabitant.		Total.	Per Inhabitant.
	gallons.	gallons.		gallons.	gallons.
1891	1,268,368	1·11	1900	1,103,969	0·82
1895	921,468	0·73	1901	1,245,652	0·90
1896	941,715	0·73	1902	1,260,438	0·90
1897	926,605	0·71	1903	1,127,222	0·79
1898	986,325	0·74	1904	1,126,400	0·78
1899	1,005,799	0·75	1905	1,131,500	0·77

The average consumption of beer per head of population has declined considerably since 1891, and in 1905 was lower than in any previous year for which information is available. The consumption of imported beer and wine is becoming less each year, although not to the extent indicated in the table, as until the last four years the figures included the imports from the other Australian States:—

Year.	Consumption of Beer.			
	Locally brewed.	Imported.	Total.	Per Inhabitant.
	gallons.	gallons.	gallons.	gallons.
1891	10,594,000	2,464,000	13,058,000	11·43
1895	9,708,000	1,629,000	11,337,000	9·02
1896	10,073,000	1,700,000	11,773,000	9·21
1897	10,688,500	1,771,500	12,460,000	9·59
1898	11,533,000	1,574,000	13,107.000	9·91
1899	12,106,000	1,629,000	13,735,000	10·21
1900	13,274,734	1,618,966	14,893,700	11·00
1901	13,118,339	1,757,907	14,876,246	10·84
1902	13,441,275	1,121,277	14,562,552	10·45
1903	12,571,758	1,011,465	13,583,223	9·55
1904	12,079,400	940,900	13,020,300	9·00
1905	12,327,900	867,800	13,195,700	8·92

The amount of beer drunk in 1891 was 13,058,000 gallons, an average of 11·43 gallons per inhabitant; but notwithstanding the large increase in population, the quantity consumed in 1905 was only 13,195,700 gallons, or 8·92 gallons per head.

The consumption of beer and spirits can be determined accurately; but as there is no excise duty on wine it is only possible to estimate the consumption on the basis of the production, and the results can hardly be regarded as satisfactory in view of the great variations shown by successive years.

The wine entering into consumption in New South Wales is chiefly the produce of Australian vineyards; but the quantity produced in the State is much less than might be expected in a country so eminently adapted to viticulture. The quantity of Australian and foreign wines consumed during each of the past ten years is shown below :—

Year.	Consumption of Wine.			
	Australian.	Foreign.	Total.	Per Inhabitant.
	gallons.	gallons.	gallons.	gallons.
1891	788,038	173,541	961,579	0·84
1895	727,372	80,685	808,057	0·64
1896	707,506	81,561	789,067	0·62
1897	861,737	76,494	938,231	0·72
1898	771,214	76,918	848,132	0·64
1899	831,765	75,493	907,258	0·67
1900	816,908	87,026	903,934	0·67
1901	700,017	93,984	794,001	0·58
1902	851,539	167,921	1,019,460	0·73
1903	845,333	107,551	952,884	0·67
1904	941,100	40,500	981,600	0·68
1905	1,075,500	29,100	1,104,600	0·75

The amount expended upon wines, spirits, and fermented liquors consumed in the State during the year 1905 was about £4,462,000. Of this sum, £2,597,400 was the cost of liquors to the retailer, of which £1,117,400 represents duty, excise, and license fees, and £1,480,000 the invoice price of the goods. The cost of working the trade and the profits of the merchants and retailers, therefore, came to £1,864,600. The expenditure on liquors per inhabitant amounted to £3 0s. 4d. during the year, which is undoubtedly a large sum, representing about 7 per cent. of the average income, but is yet considerably below the amount expended in 1891, as will be seen from the following table :—

Year.	Expenditure on Intoxicants.			
	Total.	Per Inhabitant.		
	£	£	s.	d.
1891	4,906,400	4	5	11
1895	3,851,300	3	1	3
1896	4,063,000	3	3	7
1897	4,086,400	3	2	11
1898	4,243,500	3	4	2
1899	4,402,250	3	5	5
1900	4,769,900	3	10	5
1901	5,000,000	3	12	10
1902	4,875,000	3	10	0
1903	4,569,000	3	4	3
1904	4,406,000	3	1	0
1905	4,462,000	3	0	4

New South Wales compares favourably with other countries as regards the average consumption per head of population as will be seen from the following table. The figures are based on the latest available data, and in nearly all cases refer to the year 1903 :—

Country.	Consumption per Head of Population.		
	Spirits.	Wine.	Beer.
	galls.	galls.	galls.
United Kingdom	1·0	0·4	29·7
Canada	0·8	......	4·8
New Zealand	0·8	0·2	9·5
Denmark	3·2	......	20·8
Sweden	1·7	......	12·5
Belgium	1·2	1·0	47·7
Germany	1·8	1·3	25·6
France	1·4	30·2	4·8
Italy	0·3	24·2	......
United States	1·2	0·4	15·0
New South Wales	0·8	0·8	8·9

Denmark consumes more spirits per head than any other country, France more wine, and Belgium more beer.

COST OF LIVING.

The expenditure of the people of New South Wales during 1905 is estimated at £60,864,000, and this includes all expenses apart from those incidental to earning the incomes. Of this total, food and non-alcoholic beverages represent over one-third, while about one-tenth is spent on tobacco and intoxicants. The chief items are summarised below, and the total expenditure and the daily cost per inhabitant are also given :—

Division of Expenditure.	Expenditure.		Proportion of Expenditure.
	Amount.	Daily, per Inhabitant.	
	£	d.	per cent.
Food, &c.	23,161,000	10·3	38·1
Intoxicants and narcotics	5,746,000	2·6	9·4
Clothing and drapery	6,832,000	3·1	11·2
Rent or value of buildings used as dwellings	7,522,000	3·3	12·4
Direct taxes not falling on trade	668,000	·3	1·1
Sundries	16,935,000	7·5	27·8
	60,864,000	27·1	100·0

The expenditure on sundries includes amongst other items, furniture, books, newspapers, private postage and telegrams, fuel, light, household expenses, art and amusement, personal attendance and lodging, and medical attendance.

The cost of providing food, and beverages other than intoxicants, consumed in the State during the year 1905 is set down at £23,161,000. This sum represents the price to the consumer, and covers all charges except that of cooking and preparing the food for the table. The expenditure on wines, spirits, and beer amounted to £4,462,000, so that the total expenditure for all food and beverages was £27,623,000, equal to £18 13s. 8d. per inhabitant, or 12·3d. daily. Excluding intoxicants, the yearly expenditure per inhabitant was £15 3s. 8d., and the average per day, 10·3d.

The average annual expenditure on food is subject to considerable variation, being governed by the prices of necessary commodities and also by the degree of prosperity enjoyed by the mass of the people. In 1904 the average daily expenditure on food, exclusive of intoxicants, was only 9·4d.

The following is the approximate retail cost of the chief articles which enter into daily consumption :—

	£
Bread	2,855,000
Fresh meat, fish, game, &c.	7,172,000
Vegetables and fruits	3,171,000
Milk, butter, cheese, &c	3,582,000
Other farm produce	835,000
Sugar	1,677,000
Tea, coffee, &c.	782,000
Other foods	2,595,000
Non-alcoholic beverages	492,000
Total expenditure on food	23,161,000
Wines, beer, and spirituous liquor	4,462,000
Total expenditure on food and beverages	£27,623,000

PRICES OF COMMODITIES.

The area of New South Wales is so extensive, and the population, except on the sea-board, so scattered, that the determination with any exactness of the average prices of the various commodities consumed is a matter of no little difficulty. No attempt has therefore been made to ascertain the average for the State, and in the following pages the prices refer to the Metropolitan markets alone.

The following table exhibits the average retail prices of eight standard commodities during each year since 1870:—

Year.	Bread per 2-lb. loaf.	Fresh Beef per lb.	Butter per lb.	Cheese per lb.	Sugar per lb.	Tea per lb.	Potatoes per cwt.	Maize per bushel.
	d.	d.	s. d.	s. d.	d.	s. d.	s. d.	s. d.
1870	3½	3½	1 3	0 6	4	2 0	5 0	3 4
1871	3½	2½	1 3	0 7½	4	2 3	4 0	3 0
1872	3½	2½	1 0	0 9	4	1 9	5 0	2 2
1873	4	2½	1 3	0 5	4	1 9	3 6	3 1
1874	3½	4	1 7	0 6	4	1 9	4 9	4 6
1875	3	3½	1 3	0 9	4½	1 9	5 6	4 3
1876	3½	5½	1 3	0 7	4	1 9	4 9	3 1
1877	4	4½	1 6	0 6	4	2 0	4 9	3 4
1878	4	4	1 3	0 6	4	1 9	5 10	4 0
1879	3½	4	0 10½	0 6	3½	1 6	6 0	3 1
1880	3	3½	0 10	0 7	4	2 0	4 3	2 6
1881	3½	3½	0 10½	0 6½	3½	2 0	4 0	3 7
1882	4	4½	1 3	0 8	4	2 0	5 6	5 4
1883	3½	4	1 4	0 10	4	2 0	6 0	4 0
1884	3	4½	1 3	0 9	3½	1 6	6 6	5 0
1885	3	4½	1 9	1 0	3	1 9	5 6	3 11
1886	3½	4½	1 9	1 1	3½	1 9	6 3	3 9
1887	3½	4	1 4	0 10½	3½	1 9	5 0	3 11
1888	3	4	1 7	0 8½	3½	1 6	6 0	3 4
1889	3½	3	1 4	0 9	3¼	1 6	9 0	3 7
1890	3½	4	1 0	0 8	3½	1 6	6 0	3 10
1891	3½	4	1 1	0 9	3¼	2 0	5 0	2 11
1892	3½	4	1 3	0 8	3	1 6	5 6	3 4
1893	3¼	4	1 1½	0 8	2½	1 6	6 4	4 0
1894	2¾	3	1 0	0 8	2½	1 6	4 6	2 6
1895	2¾	3	1 0	0 8	2½	1 6	4 3	2 9
1896	3	3	1 0	0 8	2½	1 6	5 6	2 7
1897	3	2½	1 0	0 8	2½	1 6	5 3	2 3
1898	2½	2½	1 0	0 8	2	1 6	9 0	2 9
1899	3	3½	1 0	0 8	2¼	1 6	9 4	3 4
1900	3	3½	0 11	0 7½	2¼	1 4	6 9	3 0
1901	3	5	1 0	0 8	2¼	1 3	7 6	3 6
1902	3¼	6	1 2	0 10	2½	1 3	7 6	5 10
1903	3¼	5½	0 11	0 9	2½	1 3	5 10	4 6
1904	2¾	5	0 10½	0 8	2½	1 3	4 0	2 9
1905	2¾	5½	1 1	0 8	2½	1 3	10 6	4 0
1906	2¾	5½	1 1	0 8½	2½	1 3	10 6	3 9

While these tables are useful for comparative purposes, and most instructive in regard to the cost of living during the period over which they extend, the figures do not disclose what is perhaps the most interesting feature in a history of prices, namely, the great range which sometimes occurs in one year. The variation is, as might have been expected, most noticeable in the case of perishable produce.

Potatoes show remarkable fluctuations. The lowest average shown in the table for a whole twelvemonth was 3s. 6d. per cwt. in 1873, and the highest (10s. 6d.) in 1905. The price of potatoes during 1905 was higher than at any previous period since 1858.

In the list are included quotations for bread at per 2-lb. loaf. In most years the price varied somewhat regularly with that of wheat, although there are exceptions to this rule. In recent years inferior bread has been sold for 2d. per loaf, but the usual price is from 2½d. to 3d. per loaf.

In addition to the eight commodities which are given in the above statement, the following list of the average retail prices of articles largely used may not be without interest :—

Year.	Bacon per lb.		Eggs per doz.		Rice per lb.	Oat-meal per lb.	Coffee per lb.		Salt per lb.	Beer (col.) per gal.		Soap per lb.	Starch per lb.		Tobacco per lb. (col.)		Tobacco per lb. (imp.)	
	s.	d.	s.	d.	d.	d.	s.	d.	d.	s.	d.	d.	s.	d.	s.	d.	s.	d.
1870	0	10½	1	4	3	4	1	2	1	1	4	4	0	7	1	3	3	6
1871	0	9½	1	4	2½	2½	1	0	0½	2	3	3	0	4½	1	0	3	0
1872	0	9	1	1	3	3	1	1	0¾	1	4	3	0	5	1	4	3	6
1873	0	9	1	4	2½	2¾	1	2	0½	2	3	3	0	5	2	0	3	6
1874	0	8¾	1	6	3	3¾	1	4	0½	2	0	2¾	0	6	1	9	3	3
1875	0	9½	1	6	3	3	1	2	1½	3	0	3	0	5	2	0	3	9
1876	0	9	1	0	3	3	1	2	1	2	0	2¾	0	5	1	9	3	0
1877	0	8½	1	6	3	3¼	1	3	1	2	0	2¾	0	5	2	0	3	9
1878	0	9	1	3	3	3	1	3	0½	2	0	2	0	5	1	6	3	9
1879	0	8	1	7	2½	2¼	1	0	0½	2	0	2	0	5	1	6	3	0
1880	0	7½	1	4	3	3	1	5	0¾	2	0	3	0	5½	2	0	4	0
1881	0	7½	1	0	3	3	1	5	0¾	2	0	3	0	5½	2	0	4	0
1882	1	0	2	0	3¼	4	1	5	1	2	0	2½	0	6	3	0	5	0
1883	1	0	1	11	3	4	1	9	1	2	0	3	0	7	3	0	6	0
1884	0	11½	1	11	2½	3	1	4	1	2	0	3	0	6	3	0	5	0
1885	0	10½	1	10	3	3	1	5	0¾	2	0	3	0	6½	3	0	6	0
1886	0	10½	1	8	3¼	2¾	1	6	1	2	0	4	0	6½	4	0	5	6
1887	0	10	1	7	3	2¾	1	6	1	2	0	3½	0	6½	4	0	5	6
1888	0	10½	1	7	3	2½	1	6	1	2	0	3¼	0	6	4	0	5	6
1889	0	11	1	8	3	3¼	1	6	1	2	0	3½	0	6	4	0	5	6
1890	1	0½	1	6	4	3	2	0	1	2	0	3½	0	5	4	0	6	0
1891	0	10	1	6	3	2½	2	0	1	2	0	3½	0	5	4	0	6	0
1892	0	9	1	6	3	2¼	1	10	0¾	2	0	3	0	4½	4	0	6	0
1893	0	11	1	6	3	2¼	1	10	0¾	2	0	3	0	4½	4	0	6	0
1894	0	7	1	3	3	2¼	1	10	0¾	2	0	3	0	4½	4	0	6	0
1895	0	7½	1	0	2½	2	1	9	0¾	2	0	2	0	4	4	0	6	0
1896	0	7½	1	0	2	2	1	9	0½	2	0	2	0	4	4	0	6	0
1897	0	8	1	0	2½	2½	1	9	0¾	2	0	2½	0	4	4	0	6	0
1898	0	8½	1	0	2	2½	1	9	0¾	2	0	2½	0	4	4	0	6	0
1899	0	8	0	11	2	2¼	1	10	1	2	0	2½	0	3¾	4	0	6	0
1900	0	7½	0	11	2¼	2¼	1	6	0½	2	0	3	0	3½	4	0	6	0
1901	0	8½	1	3	2½	2¼	1	6	0½	2	0	3	0	4	4	0	6	0
1902	0	10	1	6	2½	2¼	1	6	0½	2	0	3	0	4	4	0	6	0
1903	0	10	1	6	3	2½	1	6	0¾	2	0	4	0	5	4	0	6	0
1904	0	8	1	0	2½	2½	1	6	0⅝	2	0	4	0	5	4	0	6	0
1905	0	9	1	0	2½	2½	1	6	0¾	2	0	3½	0	5	4	3	6	0
1906	0	9½	1	1	2½	2½	1	6	0¾	2	0	3½	0	5	4	3	6	0

In the quotation of prices in the foregoing tables the figures given are those charged in the shops throughout the metropolitan district. It is quite possible that produce of all kinds may have been bought at cheaper rates than those stated ; but the figures will be found to represent the fair average rates, having regard to the class of goods consumed. A mere consideration of prices, however, gives but little idea of the change in the economic condition of the people, for the great improvement in the quality of the articles should also be taken into account.

WHOLESALE PRICES.

The average wholesale prices of the principal kinds of farm and dairy produce are given in the following statement for the seven years, 1900 to 1906. The average for the year represents the mean of the prices ruling during each month, and does not take into account the quantity sold during the month. The figures are those quoted by the middleman and not those obtained by the producers:—

Farm and Dairy Produce.	1900.			1901.			1902.			1903.			1904.			1905.			1906.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Wheat ...bush.	0	2	8½	0	2	8	0	4	5	0	5	1¾	0	3	2¼	0	3	5	0	3	3
Flour .. ton	6	8	6	6	6	4	9	8	9	12	6	0	9	19	0	7	19	6	7	11	6
Bran ...bush.	0	0	7¾	0	0	8¼	0	1	3¾	0	0	11½	0	0	6¼	0	0	9¾	0	0	9¾
Pollard ... ,,	0	0	8¼	0	0	9¼	0	1	4¼	0	1	2	0	0	7¼	0	1	0¼	0	0	10¼
Barley ... ,,	0	2	3	0	2	2½	0	3	9¾	0	3	11	0	2	2¼	0	2	8¾	0	3	5½
Oats ... ,,	0	2	3½	0	2	3¾	0	3	5	0	2	7¼	0	2	2¼	0	2	7¾	0	2	10½
Maize ... ,,	0	2	8¼	0	2	8¼	0	4	10	0	3	7¾	0	2	2	0	3	2¾	0	3	0
Potatoes... ton	3	13	3	5	1	3	6	10	6	4	5	0	3	8	9	7	7	6	7	10	0
Onions ... ,,	4	17	0	9	0	6	6	4	0	3	18	6	3	10	3	14	8	3	6	9	0
Hay—																					
Oaten or Wheaten ,,	2	15	3	3	15	0	6	0	0	4	19	6	2	19	6	3	5	9	3	12	0
Lucerne.. ,,	2	12	0	2	11	10	5	14	10	3	14	0	2	6	3	3	0	10	3	17	0
Straw ... ,,	1	17	6	1	18	3	3	1	0	2	16	6	1	19	0	1	14	3	2	4	0
Chaff ... ,,	3	2	3	3	10	6	5	6	9	5	3	9	3	6	0	3	11	3	3	13	6
Butter ... lb.	0	0	9¼	0	0	10¼	0	1	2½	0	0	11	0	0	8	0	0	10	0	0	10
Cheese(loaf) ,,	0	0	5½	0	0	5½	0	0	8	0	0	7	0	0	4¾	0	0	6½	0	0	6
Bacon ... ,,	0	0	6	0	0	7	0	0	9	0	0	9	0	0	7	0	0	6	0	0	7
Eggs ... doz.	0	0	11¼	0	0	11½	0	1	2¼	0	1	2½	0	1	0½	0	0	10½	0	0	11
Poultry—																					
Fowls ... pair	0	2	10	0	3	3	0	3	8	0	4	0	0	3	6	0	2	8	0	3	3
Ducks ... ,,	0	3	0	0	3	1	0	3	7	0	4	0	0	3	3	0	2	6	0	3	3
Geese ... ,,	0	5	6	0	5	2	0	6	3	0	6	5	0	5	9	0	4	6	0	5	3
Turkeys.. ,,	0	11	0	0	11	0	0	11	6	0	12	3	0	10	6	0	12	0	0	11	6
Bee produce—																					
Honey ... lb.	0	0	2¼	0	0	2¼	0	0	3	0	0	3	0	0	2½	0	0	2⅝	0	0	3¼
Wax ... ,,	0	1	0½	0	1	1	0	1	1	0	1	1	0	1	1¼	0	1	1¼	0	1	2

The figures call for little comment beyond the caution already given in regard to the prices of commodities generally—that the averages are irrespective of the quantities sold. As regards most of the articles in the list, the lower the price the larger the consumption. The exception to this rule is poultry, which is most in demand before the Christmas season, when prices are correspondingly high.

For locally-grown wheat the quotations during 1906 ranged from 3s. 0d. in December to 3s. 6d. in June. Barley and oats are for the most part imported, and the prices of these cereals during the year call for little notice. Maize, on the contrary, is largely of local growth, and its price varied from 2s. 5½d. in December to 4s. 2d. in January. Prices for the various kinds of fodder were high at the beginning of the year, and continued so for the first six month, after which they decreased considerably. Root crops shew very great range. Thus, potatoes varied between £5 9s. 3d. in January and £8 15s. 0d. per ton in April; while onions sold for £12 per ton in November, as against £2 7s. 6d. in February.

The prices of the items set forth in the tables just given are determined by the local, or at all events the Australian demand, wheat, of course, being an exception, its price being fixed by that ruling in the markets of the world.

The prices of pastoral and other raw produce, which form so large a proportion of the exports of the State, are not sensibly affected by local consumption, but are established by the prices ruling in London. In the following table are given for five years the Sydney f.o.b. prices of the principal pastoral products :—

Pastoral Produce.		1902.			1903.			1904.			1905.			1906.		
		£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Beef	lb.	0	0	2	0	0	2	0	0	1⅝	0	0	2	0	0	1¾
Mutton	,,	0	0	2	0	0	2	0	0	2⅜	0	0	2 1/16	0	0	2¼
Wool—Greasy	,,	0	0	8⅓	0	0	9¼	0	0	9	0	0	9¾	0	0	10¾
Scoured	,,	0	1	4⅔	0	1	6½	0	1	6¾	0	1	6½	0	1	8
Sheepskins—with Wool	bale	18	8	9	19	0	0	19	6	0	23	10	0	30	10	0
without Wool	,,	12	0	0	12	0	0	11	10	0	16	3	4	25	3	4
Hides	each	1	0	0	1	0	3	1	1	10	1	5	0	1	7	6
Leather	bale	30	10	0	32	0	0	29	10	0	32	3	4	35	10	0
Hair	lb.	0	1	1¼	0	1	1⅞	0	1	3	0	1	6¼	0	1	11
Bones	cwt.	0	4	7	0	6	7	0	6	3	0	7	8	0	8	8
Horns	100	1	11	8	1	12	10	1	13	4	1	11	8	1	15	2
Hoofs	cwt.	0	4	0	0	5	10	0	8	3	0	8	10	0	8	3
Tallow	,,	1	8	1	1	5	1	1	1	10	1	2	6	1	4	9
Glue-pieces	,,	0	10	1	0	8	10	0	11	6	0	8	4	0	10	3

Leather is included as a pastoral product, although it might be reckoned as a manufactured article. Wool, the staple product of the State, continued to bring high prices throughout the year, and in December the average selling price for greasy wool was 11½d. per lb. The prices of the other articles were also well maintained throughout the year. Sheepskins were nearly 30 per cent. higher than in 1905, and are now worth twice as much as in 1901. Greasy wool and scoured wool were about 50 per cent. higher than in 1901.

The next table shows the Sydney f.o.b. prices of the principal metals and of coal produced in the State. These, like the pastoral products, are not affected by the local demand, but depend upon the prices obtained in the world's markets :—

Metals.		1902.			1903.			1904.			1905.			1906.		
		£	s.	d.	£	s.	d.	£	s.	4.	£	s.	d.	£	s.	d.
Silver	oz.	0	2	0	0	2	0¾	0	2	1 11/16	0	2	3⅝	0	2	6¾
Copper	ton	49	13	4	55	1	8	55	18	4	66	18	4	85	10	0
Tin	ton	118	3	4	124	13	4	123	16	8	141	0	0	178	18	4
Lead	ton	10	3	4	10	15	0	11	0	0	12	13	4	16	10	0
Coal	ton	0	10	3	0	10	1	0	9	5	0	8	4	0	8	9

The values of all the industrial metals were more than maintained during 1906, and the increases in silver and lead are especially satisfactory in view of the State's enormous interests in these metals.

HOUSE RENTS.

The rents paid for dwellings form a large deduction from the earnings of the manual labour class in any community. In the city of Sydney and suburbs, dwellings occupied by the labouring classes yield rents as follows :—Three rooms, from 8s. to 10s. per week; four rooms, from 10s. to 12s. per week; and five rooms, 12s. to 15s. per week. Dwellings of more than five rooms are not often occupied by labouring-class families, unless there are grown-up sons and daughters who contribute to the family earnings. The rents vary in the suburbs in accordance with the class of people which comprises the population; in several of the more recently developed localities it is impossible to obtain dwellings under 12s. 6s. per week, as builders and house agents do not seek to encourage the immigration of the poorer classes to these localities.

Speaking generally, the deduction from a labourer's income for rent exceeds 25 per cent., which, from whatever point it is viewed, must be regarded as excessive.

PRICE LEVELS.

The total value of the exports of the State is greatly affected by the prices obtained for certain leading lines of raw produce, of which wool and coal are the most important. In the following table the price level of domestic exports is given for forty-six years, beginning with 1860. In order to ascertain the price-level, all the principal articles of domestic produce exported have been taken, and the prices of 1905 and the average prices of the five years 1870-74 have been applied to the quantities of each year, and the result compared with the actual total of such year. The value of the articles taken to obtain the price-level amounts on an average to more than 90 per cent. of the domestic exports, exclusive of gold. It is considered that the system adopted enables a truer estimate of the relative prices to be obtained than that of selecting the prices of certain articles without giving due weight to the quantities of such articles exported :—

Year.	Price-level of Exports.		Year.	Price-level o Exports.	
	1905 prices = 1,000.	Average of 1870-74 prices = 1,000.		1905 prices = 1,000.	Average of 1870-74 prices = 1,000.
1860	1,602	1,247	1883	1,191	926
1861	1,600	1,244	1884	1,178	919
1862	1,685	1,310	1885	1,036	806
1863	1,530	1,191	1886	996	775
1864	1,692	1,316	1887	1,023	797
1865	1,548	1,203	1888	992	773
1866	1,604	1,249	1889	1,008	785
1867	1,483	1,154	1890	974	758
1868	1,484	1,155	1891	886	689
1869	1,353	1,053	1892	839	652
1870	1,130	879	1893	758	590
1871	1,379	1,075	1894	683	532
1872	1,259	979	1895	701	546
1873	1,335	1,037	1896	738	573
1874	1,323	1,028	1897	717	557
1875	1,317	1,027	1898	758	590
1876	1,248	972	1899	946	736
1877	1,146	891	1900	877	682
1878	1,139	887	1901	848	659
1879	1,183	921	1902	900	700
1880	1,162	903	1903	958	745
1881	1,153	897	1904	933	726
1882	1,191	926	1905	1,000	778

These figures show that there has been a great fall in the prices of produce exported since 1860, or still greater since 1864, viz., from the index number 1,316 to 778, or over 41 per cent. Marked fluctuations, ranging to about 10 per cent., occurred between 1860 and 1866, when the index number was about the same as in the first-named year. From 1866 to 1870 there was a drop from 1,249 to 879, or nearly 30 per cent. A rise followed in 1871 to 1,075, or about 20 per cent., after which for three years prices continued fairly steady until there was a further decline in 1878 to 887. In 1879 the level rose to 921, and for the next four years prices continued without much change, but from 1884 to 1885 there was a fall from 919 to 806. This was succeeded by a fairly even range until 1889, when the level stood at 785. From 1889 there was a steep decline to 532 in 1894, a fall of 32 per cent. over the whole period of five years. During the following two years there was a slight rise, the level for 1896 standing at 573, but in 1897 there was again a decline to 557, followed by a further rise to 736 in 1899, and again falling to 659 in 1901. In 1903 there was a rise to 745, and a slight decline in 1904 to 726. The fall during the whole period of forty-four years was about 38 per cent. It will be seen that the purchasing power of money has steadily increased since 1864, if the customs values of the exports fairly represent the prices ruling in the general community, whether in the State or elsewhere, and that 20s. in 1905 would purchase the same articles of domestic export which in 1864 would have cost 34s.

The chief articles of domestic export are wool, coal, tin, silver, silver-lead and ore, copper, skins, tallow, and leather. Other articles have also been exported to considerable value in times past, but their importance has disappeared, or is lost in comparison with that of the products just named. Wool and coal have contributed greatly to the wealth of the State, and the fluctuation in their prices has had a very marked effect on the condition of trade. The price-level of these commodities has been computed for the period which is covered by the general table just given. It will be seen that the fluctuations in the value both of wool and of coal have been more marked than those in the value of the general exports, but the same tendency to fall is clearly enough discernible :—

Year.	Price-level.			
	Wool.		Coal.	
	1905 prices = 1,000.	Average of 1870–74 prices = 1,000.	1905 prices = 1,000.	Average of 1870–74 prices = 1,000.
1860	1,735	1,573	1,919	1,408
1861	1,925	1,746	1,893	1,389
1862	1,837	1,666	1,942	1,424
1863	1,643	1,489	1,805	1,324
1864	1,812	1,573	1,393	1,023
1865	1,531	1,388	1,366	1,001
1866	1,515	1,374	1,359	997
1867	1,532	1,389	1,307	959
1868	1,434	1,299	1,305	956
1869	1,224	1,108	1,223	897
1870	939	852	1,135	832
1871	1,262	1,145	1,113	816
1872	1,082	981	1,127	827
1873	1,124	1,019	1,666	1,223
1874	1,106	1,003	1,774	1,302
1875	1,085	984	1,774	1,302
1876	1,043	945	1,762	1,293
1877	993	900	1,736	1,273
1878	943	854	1,724	1,265
1879	1,005	911	1,706	1,252
1880	1,017	922	1,385	1,016
1881	1,013	918	991	726
1882	999	906	1,256	922
1883	1,015	920	1,344	986
1884	1,017	922	1,349	990
1885	856	777	1,349	990
1886	795	721	1,337	980
1887	817	741	1,314	964
1888	783	709	1,357	995
1889	824	747	1,311	963
1890	771	700	1,327	974
1891	683	619	1,274	935
1892	671	608	1,150	844
1893	601	545	1,085	796
1894	556	504	925	678
1895	618	560	872	640
1896	661	599	889	652
1897	637	578	863	633
1898	686	622	843	618
1899	957	867	878	644
1900	777	704	923	677
1901	706	640	1,217	893
1902	817	741	1,205	884
1903	913	828	1,188	872
1904	905	821	1,109	814
1905	1,000	907	1,000	734

A similar table for silver is given below, commencing with the year 1884, when silver-mining in New South Wales first became an important industry, owing to the discovery of the Silverton and Broken Hill mines :—

Year.	Price-level of Silver.		Year.	Price-level of Silver.	
	1905 prices = 1,000.	1884 prices = 1,000.		1905 prices = 1,000.	1884 prices = 1,000.
1884	1,743	1,000	1895	1,029	590
1885	1,672	959	1896	1,059	607
1886	1,561	895	1897	948	544
1887	1,535	880	1898	926	531
1888	1,475	846	1899	944	541
1889	1,468	842	1900	973	558
1890	1,642	942	1901	977	561
1891	1,553	890	1902	868	498
1892	1,369	785	1903	896	514
1893	1,226	703	1904	938	538
1894	998	572	1905	1,000	574

It must not be supposed that the State is altogether a loser by the fall in the prices of its exports, because the power of those exports to purchase imports must also be taken into consideration. It will, therefore, be necessary to consider also the price-level of imports. As there exist no reliable data on which price-levels for imports can be based prior to 1870, the table commences with that year.

Year.	Price-level of Imports.		Year.	Price-level of Imports.	
	1905 prices = 1,000.	Average of 1870–74 prices = 1,000.		1905 prices = 1,000.	Average of 1870–74 prices = 1,000.
1870	1,224	966	1888	988	779
1871	1,230	970	1889	1,029	812
1872	1,285	1,014	1890	1,019	804
1873	1,307	1,030	1891	974	767
1874	1,294	1,020	1892	933	736
1875	1,218	962	1893	898	708
1876	1,197	944	1894	852	673
1877	1,151	908	1895	844	666
1878	1,141	900	1896	878	693
1879	1,094	862	1897	886	700
1880	1,101	868	1898	898	708
1881	1,090	859	1899	893	704
1882	1,084	855	1900	952	752
1883	1,102	869	1901	936	738
1884	1,093	862	1902	963	760
1885	1,003	790	1903	938	740
1886	984	776	1904	941	742
1887	993	783	1905	1,000	788

It may be said generally that the fall in prices was somewhat in favour of the exports up to the year 1886. During the next twelve years the average values of the exports fell away, much more rapidly than the imports, but during the five years ended with 1904 a much more favourable result is shown. A clearer view of the operation of the fall in prices will be obtained from the table which is given below, showing the price-levels of imports of merchandise for home consumption, and exports of domestic produce, for periods of five years, with the relative fall per cent. :—

Period.	Imports.		Exports.	
	Average of five years, 1870–4, prices = 1,000.	Decline in prices in five years, per cent.	Average of five years, 1870–4, prices = 1,000.	Decline in prices in five years, per cent.
1870–74	1,000	...	1,000	...
1875–79	915	8·5	940	6·0
1880–84	863	5·9	914	2·9
1885–89	788	8·5	787	13·8
1890–94	737	6·5	645	18·0
1895–99	694	5·8	600	7·0
1900–04	746	*7·5	702	*17·0
1905	788	*5·6	778	*10·8

* Increase.

It will be seen that, assuming the index number of the five years 1870-4 to be 1,000, the fall in the succeeding five years was 8.5 per cent. for the imports, as compared with 6 per cent. for the exports. The average value of the imports for the five years ending 1884 was 5·9 per cent. less than in the preceding quinquennial period, whereas the difference in the value of the exports was 2·9 per cent. The index number for 1885-9 for both imports and exports was practically the same figure, as the fall in the value of the exports was much greater than in the value of the imports which they purchased. This unfortunate trend of prices was continued down to 1895; since then, however, prices have been more favourable, and in the period ending 1904 there was a rise of 17 per cent. on the export prices of the preceding period, while the import prices increased by 7·5 per cent. During 1905 this happy state of affairs was continued, as all pastoral products commanded a high price, and the values for silver, copper, lead, and tin were the highest realized for many years. The value of the production from primary producing industries alone was £36,094,000, the highest total yet attained. The export prices show a rise of 10·8 per cent., and as the prices of imports only showed an increase of 5·6 per cent., it will be realized in how fortunate a position the State found itself at the close of the year.

New South Wales, in common with the other Australian States, is chiefly affected by a fall in prices because it is a debtor country. As the whole of the interest on Government and municipal loans has to be paid by exports irrespective of the fall, and as a large portion also of the interest payable to private investors is in the same category, any fall in prices is a matter of very serious importance to these States. The increase in prices during the last six years is, therefore, specially gratifying, and should the prices of Australian produce be maintained, as they were in 1906, the State will be enabled to bear still more easily its heavy interest charges.

CLIMATE.

In another part of this volume there is a description of the meteorological conditions of New South Wales, so that the following is simply a statement of observations recorded by the Meteorological Branch of the Sydney Observatory. According to these records it is found that New South Wales is no exception to the rule, that the temperature of lands in the Southern Hemisphere is about 5 degrees lower than of countries situated in corresponding latitudes in the Northern. Furthermore, not only is the climate milder, but the range of temperature is not so great. This is a very important factor in estimating the healthiness of a country. Sydney, the capital of New South Wales, is situated on the coast, half-way between the extreme northern and southern limits of the State, in latitude 33 degrees 51 minutes 41 seconds south. Its mean annual temperature is 60° Fahrenheit, corresponding with that of Barcelona in Spain, in latitude 41 degrees 22 minutes north, and Toulon in France, in latitude 43 degrees 7 minutes north. The range is only 17° calculated over a period of forty-seven years, the mean Summer temperature being about 71°, and the mean Winter temperature 54°. At Naples, which has about the same mean temperature as Sydney, the range is 27°, between the means 74° and 47°.

The following table shows the average monthly meteorological conditions of Sydney during each month, based on the experience of the forty-seven years ended 1905:—

Month.	Average Reading of Standard Barometer at 9 a.m. corrected to 32° Fah. and to mean sea level.	Temperature (in shade).			Rainfall.			
		Mean Standard.	Average Reading of Maximum Thermometer.	Average Reading of Minimum Thermometer.	Average Monthly.	Greatest Monthly.	Least Monthly.	Average number of days Rain.
January	29·957	71·5	78·2	64·9	3·525	10·489	0·419	14·0
February	30·007	71·1	77·2	64·8	4·811	18·556	0·344	13·9
March	30·093	69·3	75·4	63·1	5·171	18·700	0·419	14·9
April	30·140	64·6	70·8	58·2	5·630	24·490	0·060	13·5
May	30·130	58·4	64·8	52·0	5·209	20·868	0·214	15·8
June	30·120	54·4	60·5	48·2	5·418	16·296	0·190	12·6
July	30·148	52·3	58·9	45·7	4·649	13·208	0·120	12·3
August	30·143	54·8	62·2	47·5	3·168	14·886	0·040	11·6
September	30·078	58·8	66·3	51·3	2·956	14·045	0·083	12·2
October	30·037	63·4	70·9	55·8	2·959	10·810	0·210	13·0
November	30·013	66·9	74·2	59·6	3·044	9·880	0·200	12·5
December	29·947	69·9	77·1	62·8	2·507	7·804	0·453	13·0
The whole year	30·068	63·0	69·7	56·2	49·117	24·490	0·040	159·3

New South Wales may be divided, naturally, into four climatic divisions, each with characteristic features, namely:—The Coastal Division, the Tableland, the Western Slopes, and the Western Plains.

The coastal region extends from 28° to 37° south latitude, and is from 30 to 150 miles wide. The North Coast districts are favoured with a warm, moist climate, the rainfall averaging from 40 to 70 inches annually. The mean temperature for the year is from about 66° to 69°, the mean Summer being 75° to 78°, and the mean winter 56° to 58°. In the South Coast district the rainfall varies from 30 to 60 inches. The mean temperature ranges between 57° and 63°, the Summer mean being from 66° at the foot of the ranges to 70° on the coast, and the Winter from 48° to 54° over the same area. As regards the rainfall also, both on the North and South Coast the falls are much heavier immediately near the coast. Taking the coast as a whole, the difference between the mean Summer and mean Winter temperature may be set down as not much over 20°—a range so small as to be rarely found elsewhere.

The following table shows the meteorological conditions of the principal stations in the Coastal division, arranged in the order of their latitude. These stations are representative of the whole division, and the figures are the averages of a large number of years.

Station.	Least Distance from East Coast.	Altitude.	Temperature (in Shade).						Rainfall—Mean Annual.
			Mean Annual.	Mean Summer.	Mean Winter.	Daily Range.	Highest.	Lowest.	
	miles.	feet.	°	°	°	°	°	°	inches.
Casino	28	82	67·8	77·0	57·0	25·7	116·4	21·0	43·99
Lismore	13	52	69·7	78·1	59·0	22·2	116·2	28·2	53·59
Clarence Heads	0	122	69·0	76·0	60·6	15·2	108·0	36·4	56·05
Grafton	22	40	68·5	77·1	58·1	27·0	118·0	20·9	38·91
Port Macquarie	0	49	64·2	72·1	55·4	17·6	105·4	24·9	62·64
Singleton	40	135	65·0	76·4	53·3	20·3	113·9	22·0	30·15
Morpeth	15	20	62·7	72·9	51·9	18·1	108·7	26·0	40·06
West Maitland	18	40	64·1	74·7	52·8	20·6	115·0	24·0	34·00
Port Stephens	0	30	64·2	72·0	55·5	20·8	111·2	30·2	55·70
Newcastle	1	34	64·6	72·4	55·6	15·4	110·5	31·3	47·70
Pitt Town	26	40	64·1	74·5	52·5	20·0	113·0	27·2	32·47
Emu	36	87	62·8	73·4	51·0	16·2	107·6	26·8	31·00
Parramatta	16	49	62·0	70·5	52·3	21·0	104·2	20·9	37·02
Sydney	5	146	63·0	70·8	53·8	13·5	108·5	35·9	49·05
Liverpool	18	50	59·8	70·8	48·2	20·5	106·0	22·0	38·73
Wollongong	0	54	62·7	69·9	54·8	17·0	113·4	31·9	43·09
Nowra	6	30	62·9	70·3	54·4	21·0	110·3	29·6	38·69
Jervis Bay (Cape St. George)	0	284	61·8	69·2	53·9	15·0	105·2	25·5	58·84
Moruya Heads	0	50	61·5	68·5	53·5	19·9	114·8	26·3	36·57
Bodalla	7	40	59·8	68·4	49·8	27·7	114·1	18·6	37·07
Bega	0	50	60·3	69·3	50·2	24·9	115·6	16·6	32·49
Eden	0	107	60·3	67·9	52·0	14·2	106·0	29·3	34·75

Coming to the Tableland from the Coast, a different climatic region is found. On the Northern Tableland the rainfall is consistent, ranging from 30 inches in the western parts to 40 inches in the eastern. The temperature is cool and bracing, the average for the year being between 54° and 60°; the mean Summer temperature lies between 65° and 70° and the mean Winter between 43° and 45°. The Southern Tableland is the coldest part of the State, the mean annual temperature being only about 56°. In the Summer the mean ranges from 57° to 68°, and in the Winter from 34° to 44°. At Kiandra, the elevation of which is about 4,640 feet, the mean annual temperature is 44·5°.

The statement below shows, for the Tableland division, similar particulars to those already given for the Coastal division:—

Station.	Least Distance from East Coast.	Altitude.	Temperature (in Shade). Mean Annual.	Mean Summer.	Mean Winter.	Daily Range.	Highest.	Lowest.	Rainfall—Mean Annual.
	miles.	feet.	°	°	°	°	°	°	inches.
Tenterfield	80	2,827	59·1	69·6	47·2	25·6	107·1	12·0	33·70
Inverell	124	1,980	60·4	73·5	46·3	24·8	110·6	13·4	30·71
Glen Innes	90	3,518	58·4	69·2	46·1	24·9	107·3	14·4	32·12
Bundarra	113	2,000	59·9	69·4	48·0	25·2	101·0	17·5	29·33
Armidale	81	3,333	56·5	67·7	44·4	24·4	105·2	13·9	31·87
Walcha	83	3,386	53·8	65·0	41·4	23·4	104·1	10·0	30·14
Murrurundi	94	1,545	60·4	72·3	47.9	19·8	107·3	19·0	31·99
Cassilis	120	1,500	61·1	74·7	47·1	21·7	111·7	15·8	24·04
Scone	78	680	62·2	74·4	49·3	23·4	114·4	22·2	23·68
Muswellbrook	68	475	64·5	76·7	51·6	25·4	117·6	19·0	31·99
Mudgee	121	1,635	62·3	74·3	49·5	29·2	114·4	15·2	26·15
Orange	124	2,843	55·0	67·3	42·4	19·7	100·2	16·0	36·75
Bathurst	96	2,200	56·9	69·7	44·0	28·3	112·5	13·0	23·96
Kurrajong Heights	35	1,870	53·4	61·7	44·3	13·3	99·5	25·5	50·88
Mount Victoria	61	3,490	54·5	65·7	42·6	19·6	106·0	11·9	37·79
Katoomba	58	3,349	52·6	61·9	42·2	15·3	100·0	25·9	58·28
Carcoar	111	2,380	55·7	68·0	43·1	19·1	104·9	15·4	29·54
Springwood	42	1,216	61·2	70·6	51·3	17·4	104·8	32·5	41·38
Cowra	126	987	63·2	77·4	48·7	23·5	116·1	21·6	25·31
Picton	22	549	59·4	69·5	48·1	23·8	112·0	19·7	30·33
Crookwell	81	2,000	52·4	64·4	40·2	23·7	100·8	12·1	31·91
Moss Vale	31	2,205	55·9	66·4	44·5	17·5	106·0	18·9	39·79
Goulburn	54	2,129	56·6	67·9	44·3	24·7	111·0	13·0	25·91
Yass	92	1,657	59·0	70·8	46·9	20·7	108·5	21·5	24·52
Queanbeyan	60	1,899	57·1	70·0	43·6	22·2	109·4	15·8	22·97
Kiandra	88	4,640	45·8	57·1	34·2	24·1	102·3	20 below zero	64·13
Cooma	52	2,637	54·0	65·5	41·7	29·2	112·0	8·5	19·49
Bombala	37	3,000	55·3	66·1	43·6	26·6	104·1	15·5	23·22

On the Western slopes the rainfall is distributed uniformly, and varies from 20 inches in the western parts to 30 inches in the eastern. By far the greater part of the wheat area is situated on the Western slopes, an average rainfall of 25 inches being sufficient to ensure good yields. The mean annual temperature ranges from 69° in the north to 60° in the south; in the Summer from 81° to 74°, and in the Winter from 53° to 47°.

The next statement gives, for the principal stations on the Western slopes, information similar to that shown for the Coastal and Tableland divisions:—

Station.	Least Distance from East Coast.	Altitude.	Temperature (in Shade).						Rainfall—Mean Annual.
			Mean Annual.	Mean Summer.	Mean Winter.	Daily Range.	Highest.	Lowest.	
	miles.	feet.	°	°	°	°	°	°	inches.
Moree	204	680	69·1	80·8	55·5	26·4	117·3	18·0	23·29
Warialda	162	1,106	63·2	75·8	49·7	29·3	117·7	16·0	23·19
Bingara	153	1,200	63·8	76·3	50·3	28·3	116·6	15·5	30·51
Narrabri	193	697	67·0	81·1	52·3	28·8	118·9	18·4	26·04
Gunnedah	156	874	66·4	79·8	52·3	28·1	120·6	16·7	24·93
Coonabarabran	185	1,710	60·2	73·0	47·1	33·2	111·9	11·4	29·36
Quirindi	115	1,278	65·6	77·4	52·1	27·2	113·6	17·0	26·62
Dubbo	177	863	63·1	76·4	49·2	27·4	115·4	17·0	22·36
Forbes	176	789	62·9	76·8	48·9	24·6	118·4	24·0	20·13
Young	140	1,416	61·4	73·7	49·1	28·3	113·9	20·3	25·69
Marsdens	187	700	65·6	79·6	51·0	25·0	119·7	19·0	19·53
Murrumburrah	126	1,268	62·4	74·3	49·9	27·0	114·9	20·0	23·08
Wagga Wagga	158	615	60·7	74·5	46·9	28·2	119·0	18·4	21·71
Urana	213	400	62·5	76·0	48·8	22·6	117·0	18·4	17·10
Albury	175	531	60·5	73·9	47·1	28·3	117·3	20·2	28·19

The climatic conditions of the Western division are entirely different from those of the other regions, and are sometimes described as the reverse of pleasant. The heat during part of the Summer is great; nevertheless, the Western plains are healthy, as will be seen from an inspection of the death rates for that district both among adults and children. The annual rainfall over a great part of the division does not exceed 10 inches. It increases from 8 inches on the western boundary to 10 and 15 inches along the Darling River, and 20 inches on the eastern limits. The mean annual temperature ranges from 69° in the north to 62° in the south; in the Summer from 83° to 74°, and in the Winter from 53° to 45°. Although the Summer climate of the Western plains may be hot, the Winter is almost perfect. An average temperature of over 50°, accompanied by clear skies and an absence of snow, leaves little to be desired. It is fortunate, from the standpoint of health, that the climate of the Western division is dry, otherwise the interior of the State, probably, would have become, with abundant rains, an impenetrable jungle. It is also owing chiefly to the dryness of the climate that Australia has become the producer of the best merino wool in the world.

The meteorological conditions of the Western plains will be seen from the following statement. The information is similar to that given already for the other divisions of the State.

Station.	Least Distance from East Coast.	Altitude.	Temperature (in Shade).						Rainfall—Mean Annual.
			Mean Annual.	Mean Summer.	Mean Winter.	Daily Range.	Highest.	Lowest.	
	miles.	feet.	°	°	°	°	°	°	inches.
Brewarrina	345	430	68·7	83·3	52·8	26·3	122·3	24·8	16·50
Walgett	286	522	68·4	82·1	53·8	25·8	122·2	23·7	18·69
Bourke	386	330	69·7	83·6	54·7	27·2	127·0	25·3	15·29
Wilcannia	473	246	66·4	79·6	52·8	26·2	120·8	21·8	10·33
Cobar	345	803	66·4	80·1	51·9	24·9	118·7	25·0	14·67
Mount Hope	296	600	65·3	79·1	51·3	24·8	123·6	24·6	14·96
Condobolin.	227	700	65·2	78·8	51·1	25·5	122·2	20·5	17·81
Wentworth	478	144	64·4	77·1	51·6	26·7	119·0	25·0	11·75
Hay	309	291	63·4	75·5	50·6	28·3	117·3	21·1	14·21
Euston	422	188	64·0	76·4	51·1	33·2	124·8	17·1	12·06
Deniliquin	287	268	61·5	74·1	48·5	30·2	121·1	18·0	16·35

New South Wales may be compared favourably with any country in the world. Taking into consideration the comparatively low latitudes in which it is situated, it offers a remarkable variety of temperate climates. From Kiandra, on the Southern Tableland, to Bourke, on the Great Western Plain, its climate may be compared with that of the part of Europe from Edinburgh to Messina; but more generally it resembles that of Southern France and Italy.

LAW AND CRIME.

CRIMINAL STATISTICS.

A CONSIDERATION of the tables in succeeding paragraphs will in the main make it clear that New South Wales has for some time occupied a position of unenviable pre-eminence amongst the States of the Commonwealth as regards prevalence of crime. It would, however, be extremely rash to argue from the figures presented, that the people of this State are less law-abiding than those of most of the neighbouring provinces, as several very important factors have to be considered in dealing with the returns. In the first place, it was not until the close of the year 1903 that an Influx of Criminals' Prevention Act was passed in this State, and it is a well known fact that prior to the adoption of this measure New South Wales offered a happy hunting ground to the criminals from the rest of Australia. Then again there are wide differences in the various States with respect to the laws regarding petty misdemeanours and the administration thereof, while, as is pointed out elsewhere, the jurisdiction of magistrates is by no means uniform throughout Australia. The composition of the population must also be taken into account, it being obvious that the proportion of offenders in a State with a large floating population will be considerably higher than in one where the nomadic class is less numerous.

Prior to the year 1891 the criminal statistics of New South Wales were compiled from the police returns, but it was found that the latter represented the total transactions of the various stations rather than the actual number of persons dealt with. These returns were therefore discarded, and methods of tabulation adopted from the Petty Sessions records which have ensured a more accurate presentation of facts. Except where otherwise stated, the figures in the succeeding tables refer to persons only, while it will be found possible to institute further interesting statistical comparisons in regard to arrests, since the actual number of distinct persons apprehended in each of the last ten years can be given.

MAGISTRATES' COURTS.

In the Sydney, Parramatta, Newcastle, and Broken Hill districts, the Courts of Petty Sessions are presided over by Stipendiary Magistrates, and in the country districts by Police Magistrates and Justices of the Peace, the latter of whom are honorary officers. All persons entered in the charge-books of the police, except such as have been committed by a Supreme Court Judge or by a Coroner, must be brought up at the Petty Sessions, either to be dealt with summarily or to be committed to a higher tribunal. The jurisdiction of magistrates is limited generally to offences involving a sentence of six months' imprisonment, either peremptorily or in default of payment of a fine, but under a few Acts—State and Commonwealth—sentences up to two years' imprisonment may be imposed. A magistrate is not empowered to pass cumulative sentences, but while a person is undergoing a term of imprisonment for the committal of one offence, he may be brought up in a lower court to answer to another charge, and if convicted may be sentenced to another term, to take effect from the expiry of the first offence.

Exclusive of those charged as being of unsound mind, the persons brought before magistrates during the year 1905 numbered 61,127, of whom 38,172 had been arrested, while 22,955 appeared on private and police summons. This gave a proportion of 4,134 per 100,000 of population, as compared with 4,277 in the year 1901; so that during the five years the amount of crime, as disclosed by the returns of the lower courts, decreased to the extent of 143 per 100,000 inhabitants. Below will be found a table showing in what manner the accused persons were brought up to answer the charges preferred against them, and how their cases were disposed of. It is to be understood that where several offences were charged against a person on the one appearance, account is only taken of the most important:—

How brought up.	Persons charged before Magistrates.	Summarily dealt with.			Committed
		Convicted.	Discharged, etc.	Total.	
By arrest..............................	38,172	33,692	3,201	36,893	1,279
By private and police summons	22,955	17,946	4,834	22,780	175
Total......................	61,127	51,638	8,035	59,673	1,454

It will be seen from the above table that of the 61,127 persons charged before magistrates during the year, only 1,454 were committed to higher courts, and no less than 59,673 were summarily dealt with—convictions being recorded in 51,638 cases, while 8,035 persons were discharged after evidence had been taken, or against whom proceedings were not pressed. Appended is a division of the accused persons according to sex, from which it may be gathered that while females contributed 10,506 to the ranks of the offenders, only 1·36 per cent. of their number were committed to a higher tribunal, as compared with 2·59 per cent. of the males. Of the females committed, 49 per cent. were charged with various forms of larceny and false pretences:—

Sex.	Charged before Magistrates.	Summarily dealt with.			Committed.
		Convicted.	Discharged, etc.	Total.	
Males	50,621	42,801	6,509	49,310	1,311
Females	10,506	8,837	1,526	10,363	143
Total, Persons	61,127	51,638	8,035	59,673	1,454

Comparing the male and female offenders with the population, it will be found that of every 100,000 males in the State during 1905, 6,457 were charged with offences against the law, while of an equal number of females but 1,513 were accused before magistrates. The summary convictions give the proportions of 5,459 per 100,000 males and 1,272 per 100,000 females. In the case of committals, however, the females emerge from the comparison on much more favourable terms, for while 167 of every 100,000 males were sent up to higher courts during the year, the proportion of females so dealt with was but 21. The preceding table, reduced to a population basis, will be found below:—

Sex.	Per 100,000 of Population.				
	Charged before Magistrates.	Summarily dealt with.			Committed.
		Convicted.	Discharged, etc.	Total.	
Males	6,457	5,459	830	6,289	167
Females	1,513	1,272	220	1,492	21
Persons	4,134	3,492	543	4,033	98

Although the mean population within the metropolitan area in 1905 was 524,100, as compared with 954,500 in the country districts, 33,625 of the 61,127 persons charged before magistrates during the year were brought up in the metropolitan division. On the basis of population, this gives a proportion of 6,416 offenders per 100,000 inhabitants in the metropolis—a much heavier rate than that of the country, viz., 2,881 per 100,000. It is, of course, obvious that where the temptation to break the law is greatest, the largest number of offenders will be found; and it is also the case that many offences, such as drunkenness and other offences against good order, are liable to be promptly dealt with in large aggregations of population, while to a great extent they escape attention in sparsely-settled districts. If an examination be made into the nature of the offences with which the accused were charged, it will be found that, while the total rate of the metropolitan district was 123 per cent. higher than that of the country, the rate of offences against the person and against property in Sydney and suburbs was but 79 per cent. above the corresponding rate for the other parts of the State. The difference in the percentage of offenders committed in the two divisions, which may be seen from the following table, is chiefly attributable to the great excess of persons within the metropolitan area charged with offences against good order:—

District.	Persons charged before Magistrates.	Summarily dealt with.			Committed.
		Convicted.	Discharged, etc.	Total.	
TOTAL NUMBER OF OFFENDERS.					
Metropolitan............	33,625	28,603	4,286	32,889	736
Country	27,502	23,035	3,749	26,784	718
New South Wales ...	61,127	51,638	8,035	59,673	1,454
PER 100,000 OF POPULATION.					
Metropolitan............	6,416	5,458	818	6,275	140
Country	2,881	2,413	393	2,806	75
New South Wales ...	4,134	3,492	543	4,035	98

Leaving the committals to be dealt with in the higher court returns, an investigation into the nature of the offences of which the 59,673 persons summarily dealt with in 1905 were accused, shows that there were 2,996 persons charged with offences against the person, 81 with offences against person and property, 4,857 with offences against property only, 19 with forgery and offences against the currency, and 51,720 with other offences, the overwhelming majority of which were of a minor character, consisting chiefly of drunkenness and other offences against good order—such as disorderly conduct and using bad language—and of vagrancy and breaches of various Acts. It is evident, therefore, that the somewhat large number of offenders summarily dealt with is made up principally of persons who cannot justly be included amongst the criminal classes, the total number of offenders against the person and against property, including forgery and offences against the currency, being 7,953 out of a total of 59,673. Appended will be found a classification of the offenders summarily dealt with, together with the proportions per 100,000 of population during each of the last five years :—

Year.	Against the Person.	Against Person and Property.	Against Property only.	Forgery and Offences against the Currency.	Against Good Order, and all other Offences.	Total.
			NUMBER OF OFFENDERS.			
1901	3,639	60	4,685	18	49,017	57,419
1902	3,518	74	5,382	16	50,112	59,102
1903	3,275	79	5,609	21	50,991	59,975
1904	2,996	78	4,997	21	50,208	58,300
1905	2,996	81	4,857	19	51,720	59,673
			PER 100,000 OF POPULATION.			
1901	265·2	4·4	341·5	1·3	3,572·5	4,184·9
1902	252·4	5·3	386·2	1·1	3,595·9	4,240·9
1903	230·1	5·6	394·2	1·5	3,583·8	4,215·2
1904	207·1	5·4	345·4	1·5	3,471·1	4,030·5
1905	202·6	5·5	328·4	1·3	3,497·9	4,035·7

The above figures show that there has been a considerable decrease in the proportion of offenders during the last five years, the rate per 100,000 having declined from 4,185 in 1901 to 4,036 in 1905. A gratifying decrease is shown in the rate of offences against the person, the figures falling from 265 per 100,000 in 1901 to 203 in 1905, or by 23 per cent. The rate of offences against good order also shows a decline, as does also the rate of offences against property.

The following table gives a classification of the offences for which summary convictions were obtained during 1905. Of every 100,000 males in the State, 5,459 were summarily convicted; and of every 100,000 females, 1,272 were similarly dealt with. The offences of which the females were found guilty were naturally less serious than those committed by the males. As the table shows, the number of offences against the person and against property was 525 per 100,000 males and 75 per 100,000 females:—

Offences.	Summary Convictions.			Per 100,000 of Population.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
Offences against the person	1,236	138	1,374	158	20	93
Offences against person and property	3	2	5	....	....	....
Offences against property only	2,876	385	3,261	367	55	221
Forgery and offences against the currency	....	....	....	....	....	....
Offences against good order	28,063	6,805	34,868	3,579	980	2,358
Offences not included in the preceding	10,623	1,507	12,130	1,355	217	820
Total	42,801	8,837	51,638	5,459	1,272	3,492

The following table gives the total number of summary convictions of males and females, with the proportion per 100,000 of the population, for each year of the last quinquennial period:—

Year.	Summary Convictions.			Per 100,000 of the Population.		
	Males.	Females.	Total.	Males.	Females.	Total.
1901	41,961	7,001	48,962	5,820	1,075	3,569
1902	43,040	7,736	50,776	5,886	1,168	3,643
1903	43,082	8,297	51,379	5,748	1,232	3,611
1904	41,416	8,686	50,102	5,424	1,271	3,463
1905	42,801	8,837	51,638	5,459	1,272	3,492

Although the total number of convictions during the period shows an increase of over 2,600, the rate per 100,000 of the population slightly declined, the proportion in 1905 being 3,492 per 100,000 as compared with 3,569 for the year 1901.

Below will be found a classification of the punishments on summary conviction in 1905:—

Offences.	Fines Paid.	Imprisoned in default.	Peremptorily Imprisoned	Bound over.	Other Punishments.	Total.
Offences against the person	845	254	206	64	5	1,374
Offences against person and property	1	......	2	..	2	5
Offences against property only	1,200	880	869	206	106	3,261
Forgery and offences against the currency	....	......	......	..	....	..
Offences against good order	16,310	16,129	1,079	190	1,160	34,868
Offences not included in the preceding	10,465	1,317	269	3	76	12,130
Total	28,821	18,580	2,425	463	1,349	51,638

As shown above, the number of convicted persons sentenced to peremptory imprisonment was 2,425, and adding those incarcerated in default of paying the fine or of finding security, viz., 18,580, the total number imprisoned was 21,005, out of 51,638 summarily convicted by the magistrates, or nearly 41 per cent. The number of fines paid was 28,821; but many of those who were imprisoned in default of immediately paying the fine imposed were discharged before the term had expired, the amount having been paid in the meanwhile. The total sum received by way of fines during 1905 was £33,642, of which amount £16,636 was paid into the Consolidated Revenue, £9,334 was given to the Police Reward Fund, £14 was paid to hospitals, £2,179 to municipalities, and £5,479 to informers and others. The amount of the fines received during each year since 1896 is given below :—

Year.	Amount.	Year.	Amount.
	£		£
1896	19,313	1901	24,982
1897	20,749	1902	31,487
1898	23,103	1903	27,799
1899	21,596	1904	28,337
1900	22,510	1905	33,642

Under the "Crimes Act, 1900," provision has been made for whipping as an additional punishment, chiefly for wanton and unprovoked assault and for indecent exposure. The Bench must consist, in the metropolitan district, of two Stipendiary Magistrates, and in the country districts, of a Police Magistrate and one or more Justices of the Peace. In no case was whipping added to a sentence of imprisonment passed in a magistrate's court during the year 1905.

With reference to first offenders, the Crimes Act provides that when a person who has not been previously convicted of an indictable offence is convicted of a minor offence, and is sentenced to penal servitude or imprisonment, the court may suspend the sentence upon his entering into a recognizance, with or without sureties, for his good behaviour during the period over which his sentence extends, the probationary term, however, being not less than one year in every case. Before he is permitted to depart from custody he is examined for future identification, and during the period covered by his sentence he must report himself to the police every three months. If he should fail to do so, or should again lapse into crime, he may be arrested and committed to gaol for that portion of his sentence which is still to run; but should his behaviour be good throughout the whole of the probationary period, he is not regarded as having been convicted, and if at any time later on he is arrested for another offence a previous conviction cannot be put in against him. During the year 1905 259 persons summarily convicted at the Magistrates' Courts, and 112 persons at the higher courts, making a total of 371, including 66 females, were released consequent upon being treated as first offenders under the Crimes Act. Since the passing of the Act, it has happened on more than one occasion that persons with previous convictions have been able to secure the advantages of its provisions. Thus, in 1899, there were 8 persons treated as first offenders, of whom 5 had been convicted once previously, and 2 four times previously, while one man had no less than 7 previous convictions recorded against him. In 1900 there were 9 convicted persons treated as first offenders, and of these 4 had one previous conviction, 2 had two previous convictions, 2 had three previous convictions, and 1 male offender had been four times previously convicted. In 1904 the provisions of the Act were extended to two persons, each of whom had been previously convicted. The inadequacy of the means of identification of prisoners was, of course, chiefly responsible for the foregoing results; but with the extension of the finger-print system—the credit of introducing which is due to Mr. S. McCauley, Deputy-Comptroller of Prisons—criminals now have less opportunity of posing as first offenders, and during 1905 no such cases occurred. The bureau at the Police Department contains some thousands of finger-prints, which are in the care of expert officers, who, with the irrefutable evidence of finger-prints, can readily trace persons who have committed crimes, if such persons were at one time inmates of gaols and had their finger-prints recorded. Bureaux for the recording of digital impressions have been established in the capitals of the other States, and the interchange of identification cards has been arranged for, and the whole of the Police and Prison Departments in Australia are now working in conformity with the system elaborated in New South Wales.

The total number of persons summarily convicted has been given in a previous table. Below will be found a distribution of offenders convicted into three groups, with the proportion of the population in each for the years 1901-5:—

Year.	Offenders against the person, and against person and property.		Offenders against property only.		Other Offenders.	
	Number.	Per 100,000 of Population.	Number.	Per 100,000 of Population.	Number.	Per 100,000 of Population.
1901	1,675	122·0	2,972	216·8	44,315	3229·7
1902	1,657	118·9	3,530	253·3	45,589	3271·2
1903	1,528	107·4	3,747	263·5	46,104	3240·0
1904	1,436	99·3	3,307	228·7	45,350	3135·8
1905	1,379	93·3	3,261	220·5	46,996	3178·5

A gratifying feature of the above table is the decrease, both absolute and relative, in the offences against the person and against person and property. As the table shows, the proportion of the population convicted of these offences has fallen steadily from 122 per 100,000 in 1901 to 93 per 100,000 in 1905. The proportion of other offenders—this column including offences against good order, as well as infractions of a minor character generally, also fell during the period from 3,230 to 3,179 per 100,000 of the population. A slight increase is, however, noticeable in offences against property only, the present proportion being 221 per 100,000, as compared with 217 for the year 1901. Since the appointment of Stipendiary Magistrates in the metropolitan district, there has been a greater proportion of cases summarily dealt with, while it is also noticeable that the proportion of acquittals and discharges has greatly fallen off. Prior to 1880 it may be said that about 25 per cent. of the persons brought before magistrates were discharged, while in no year shown since 1885 was the proportion more than 16·6 per cent. until 1895, when the figures reached 20·2. Since that year the percentage has again declined, falling as low as 13·1 in 1905. The following table shows the proportion of summary convictions by magistrates, of acquittals and discharges, and of committals to higher courts:—

Year.	Summary Convictions.	Acquittals and Discharges.	Committals to Higher Courts.
	per cent.	per cent.	per cent.
1870	69·0	24·7	6·3
1875	70·1	25·3	4·6
1880	76·9	18·4	4·7
1885	82·9	14·1	3·0
1 90	80·4	16·0	3·6
1895	77·4	20·2	2·4
1896	80·5	17·1	2·4
1897	79·4	18·0	2·6
1898	80·9	16·7	2·4
1899	81·3	16·3	2·4
1900	83·1	14·9	2·0
1901	83·4	14·4	2·2
1902	84·1	13·8	2·1
1903	83·7	14·0	2·3
1904	83·7	13·7	2·6
1905	84·5	13·1	2·4

CHILDREN'S COURTS.

The first Children's Court under the Neglected Children and Juvenile Offenders' Act was opened in October, 1905, at Paddington, within the metropolitan area, under the presidency of a specially-appointed magistrate. Special courts have since been established in suburban and country districts. The chief purpose of these courts is to remove from the trial of juvenile offenders as much as possible the disagreeable surroundings of a police court. Magistrates exercise powers and authorities in respect of children and offences committed by or against children. They also possess the authorities of a Court of Petty Sessions or Justice under the Children's Protection Act and the Infant Protection Act. From the 5th October to 31st December, 1905, the Children's Courts dealt with the cases of 606 males and 46 females, or a total of 652 persons. Of the cases before the courts, 539 were in relation to offences, and 113 had regard to orders, of which affiliation cases numbered 82, and there were 12 orders for preliminary expenses under the Infant Protection Act. The Neglected Children's Act prevents children from associating with reputed thieves, and the Act otherwise provides for the protection and reformation of neglected or uncontrollable children and juvenile offenders. The physical and moral well-being of children engaged in street trading is ensured, and, to better attain this object, girls under 16 years of age are prohibited from trading, and only boys between the ages of 10 and 16 years are licensed, whilst the hours of trading are restricted. The police exercise supervision over the children whilst they are trading, selling newspapers, &c. The objects of the Act are so admirable that similar legislation is foreshadowed in other parts of Australia.

APPREHENSIONS.

In the following table will be found the total number of persons apprehended by the police, together with the proportion per 100,000 of the population for each year of the decennial period 1896-1905. It will be seen that the rate shows a satisfactory decline, the proportion in 1905 being about 10 per cent. lower than in the opening year of the period :—

Year.	Arrests.		Year.	Arrests.	
	Number.	Per 100,000 of Population.		Number.	Per 100,000 of Population.
1896	36,642	2,884	1901	38,092	2,776
1897	35,443	2,747	1902	39,590	2,841
1898	35,864	2,732	1903	40,561	2,851
1899	35,837	2,687	1904	38,188	2,640
1900	37,462	2,766	1905	38,172	2,582

The above figures refer to the total number of arrests made by the police in each year of the decennial period, and, of course, include the whole of the separate arrests of any particular individual. Since the year 1898, however, owing to the more detailed information collected on the arrest cards, it has been found possible to tabulate the number of distinct persons apprehended, and the figures for each year of the period 1898-1905 will be found in the following statement:—

Year.	Distinct Persons Arrested.					
	Males.	Per 1,000 of Population.	Females.	Per 1,000 of Population.	Total.	Per 1,000 of Population.
1898	23,507	33·7	2,975	4·8	26,482	20·2
1899	25,090	35·5	3,242	5·2	28,332	21·2
1900	24,433	34·2	3,249	5·1	27,682	20·4
1901	24,686	34·2	3,426	5·3	28,112	20·5
1902	24,481	33·5	3,860	5·8	28,341	20·3
1903	23,933	31·9	3,645	5·4	27,578	19·4
1904	21,952	28·7	3,605	5·3	25,557	17·7
1905	22,750	29·0	3,768	5·4	26,518	17·9

It will be seen from the foregoing figures that there has been a considerable decrease, both absolute and relative, in regard to the total number of distinct persons arrested, the proportion per 1,000 of population in 1905 being only 17·9, compared with 20·2 eight years ago. The figures for females show a slight increase, but the number and proportion of males declined considerably during the period.

AGES OF OFFENDERS.

The ages of distinct persons arrested for various classes of offences during the year 1905 are given below. It will be seen that the most serious offences were charged against persons between the ages of 25 and 30, while the largest number of offenders occurred in the age group 50 and upwards, this class including the greatest proportion of confirmed drunkards and vagrants:—

Offences.	Ages.											Total Apprehensions.
	Under 10.	10—14.	15—19.	20—24.	25—29.	30—34.	35—39.	40—44.	45—49.	50 and over.	Not stated.	
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Against the person	1	7	115	305	337	186	157	118	59	125	2	1,412
Against person and property	4	11	56	61	50	27	19	14	11	16	..	269
Against property only	16	234	625	592	595	438	314	266	158	286	1	3,525
Forgery and offences against the currency	..	1	20	14	17	14	9	4	4	3	..	86
Against good order, including drunkenness	..	20	1,017	2,282	2,754	2,435	2,575	2,531	2,123	4,239	12	19,988
Not included in the preceding	..	1	140	257	256	190	135	103	64	91	1	1,238
Total	21	274	1,973	3,511	4,009	3,290	3,209	3,036	2,419	4,760	16	26,518

The proportion of offences committed at different ages by males and females is shown below for the year 1905:—

Ages.	Distinct Persons Arrested.			Per 100,000 of mean population of each age group.		
	Males.	Females.	Total.	Males.	Females.	Total.
	No.	No.	No.	No.	No.	No.
Under 10 years	21	...	21	12	...	6
10—14 ,,	267	7	274	296	8	145
15—19 ,,	1,667	306	1,973	2,148	400	1,281
20—24 ,,	2,881	630	3,511	4,176	907	2,536
25—29 ,,	3,408	601	4,009	5,502	995	3,276
30—34 ,,	2,750	540	3,290	4,740	1,080	3,046
35—39 ,,	2,693	516	3,209	4,642	1,161	3,132
40—44 ,,	2,619	417	3,036	5,302	1,155	3,550
45—49 ,,	2,140	279	2,419	5,808	1,086	3,867
50 and over	4,291	469	4,760	4,379	656	2,806
Not stated	13	3	16	332	216	301
Total	22,750	3,768	26,518	2,902	542	1,793

BIRTHPLACES OF OFFENDERS.

At the Census of 1901 the persons born in New South Wales formed 72·2 per cent. of the total population; while of the 26,518 males and females arrested during the year 1905 only 12,242, or just over 46 per cent., were born in the State. These figures are not, however, to be taken by themselves as proving the law-abiding character of the native-born as compared with the remainder of the community, as the bulk of the people under 21 years of age are by birth Australian, while males largely predominate over females among the British and foreign-born residents within the state. With the steady increase in the number of those born within the boundaries of New South Wales, there has naturally been a corresponding increase in the proportion contributed by them to the total number of apprehensions, the figures in 1905 being 46·2 per cent. as against 32·8 per cent. in 1891; and similarly, the proportion of arrests of persons born in other parts of Australasia has risen in this State from 8·6 per cent. to 12·3 per cent. in the same period; while a decline in the proportion of persons of other than Australian birth resident in New South Wales has been accompanied by a decrease in the proportion of apprehensions contributed by them, the figures falling from 58·5 per cent. to 41·5 per cent. during the period under review.

But little can be gained by a comparison of offences with the number of persons of each nationality, as the bulk of the offences are committed by the adults, who comprise only about one-fourth of the native-born, as against nearly 90 per cent. of the residents of other nationalities. Further, a large proportion of the foreign offenders consists of seamen who were sent to gaol for various breaches of discipline on board ship, for drunkenness, or for other minor offences, and it is, of course, obvious that persons of this class can by no means be regarded as typical of the race to which they belong.

The native countries of distinct persons arrested in 1905 will be found in the following table:—

Birthplaces.	Offences.						Total Apprehensions.
	Against the person.	Against person and property.	Against property only.	Forgery and offences against the currency.	Against good order.	Not included in the preceding.	
	No.	No.	No.	No.	No.	No.	No.
New South Wales	789	187	2,134	51	8,623	458	12,242
Victoria	80	14	222	6	1,125	82	1,529
Queensland	40	8	78	4	351	21	502
South Australia	22	3	67	4	341	22	459
Other Commonwealth States and New Zealand	42	4	127	2	571	33	779
England and Wales	154	22	384	9	3,240	163	3,972
Scotland	37	4	95	1	1,158	56	1,351
Ireland	86	5	181	2	2,723	55	3,052
Other British Possessions	26	1	30	....	251	24	332
France	6	1	10	....	133	14	164
Germany	17	5	35	1	304	38	400
China	14	3	25	2	44	99	187
Norway and Sweden	33	2	28	....	444	57	564
United States	22	9	50	3	289	42	415
Other Foreign Countries	42	1	54	1	369	73	540
At Sea	....	....	2	....	10	1	13
Unknown	2	....	3	....	12	....	17
Total	1,412	269	3,525	86	19,988	1,238	26,518

As the table shows, natives of New South Wales formed much less than half the total apprehensions, natives of other portions of Australasia comprising over 12 per cent. Under the stringent provisions of the Influx of Criminals Prevention Act of 1903, it is believed that this latter proportion will fall away considerably in future years.

RELIGION OF OFFENDERS.

The nominal religious profession of each person arrested is ascertained and entered in the charge-sheet. During 1905 the arrests of distinct persons belonging to each of the various denominations were:—

Religions.	Offences.						Total Apprehensions.
	Against the person.	Against person and property.	Against property only.	Forgery and offences against the currency.	Against good order.	Not included in the preceding.	
	No.	No.	No.	No.	No.	No.	No.
Church of England	527	131	1,554	49	7,445	448	10,154
Roman Catholic	605	97	1,406	25	9,029	399	11,561
Presbyterian	106	8	232	4	1,801	89	2,240
Methodist	53	14	142	3	451	47	710
Congregational	5	....	18	2	47	4	76
Baptist	8	....	20	....	64	9	101
Lutheran	38	4	39	....	550	104	735
Salvation Army	2	....	5	....	17	....	24
Other Christian Denominations	3	1	6	....	52	3	65
Hebrew	7	3	21	1	48	12	92
Mahommedan	11	....	4	....	28	10	53
All others	47	11	78	2	456	118	767
Total	1,412	269	3,525	86	19,988	1,238	26,518

No great reliance can be placed on the statements of religious belief in the case of many of the persons arrested, as offenders have been known to return themselves as belonging to two or more different denominations in the course of a single year. Making due allowance on this score, however, the foregoing figures may be taken as giving a very fair indication of the religious beliefs of distinct persons arrested in 1905. It will be seen that Roman Catholic offenders form by far the largest proportion of the total. This denomination numbers about 26 per cent. of the population, while the proportion of persons so returning themselves was 43·6 per cent. of the total offenders.

EDUCATION OF OFFENDERS.

The degree of education of those who were arrested is shown in the next table. As the amount of education possessed by persons who are said to be able to read only must be very slight, the distinction between this class and the completely illiterate has not been attempted:—

Offences.	Degree of Education.						Total Apprehensions.
	Illiterate.			Read and Write.			
	Males.	Females.	Total.	Males.	Females.	Total.	
	No.	No.	No.	No.	No.	No.	No.
Against the person	57	3	60	1,270	82	1,352	1,412
Against person and property	11	...	11	248	10	258	269
Against property only	139	17	156	2,945	424	3,369	3,525
Forgery and offences against the currency	1	...	1	76	9	85	86
Against good order, including drunkenness	574	70	644	16,214	3,130	19,344	19,988
Not included in the preceding	77	1	78	1,138	22	1,160	1,238
Total	859	91	950	21,891	3,677	25,568	26,518

The proportion of persons of 20 years and upwards in the community who are able to read and write is estimated to be about 94 per cent., while in 1905 the proportion of persons arrested who were so far educated was over 96 per cent. It would be rash to argue from these premises that the spread of education has been unaccompanied by a decrease in crime, for, as shown elsewhere, there has been a definite improvement both as regards petty offences as well as in connection with more serious charges. The figures simply demonstrate the spread of education, even amongst those persons who, from environment or hereditary tastes, may be considered more or less predisposed to lapse into crime.

DRUNKENNESS.

During 1905 the arrests for drunkenness, with and without disorderly conduct, numbered 20,699, or 54·2 per cent. of the total number of arrests, as compared with 20,580 arrests, and a proportion of 54 per cent., for the year 1901. There were also 767 persons proceeded against by summons for this offence, as against 543 in 1901. The total number of cases of drunkenness dealt with by the police was, therefore, 21,466, as compared with 21,123 in 1901. The proportion of cases of drunkenness per 100,000 of population was 1,452, the second lowest rate for the last ten years.

The following table shows the number of arrests and summons cases for drunkenness in the metropolitan and country districts :—

Cases of Drunkenness.	Metropolitan.	Country.	New South Wales.
	No.	No.	No.
Apprehensions	13,606	7,093	20,699
Summons Cases	121	646	767
Total.....................	13,727	7,739	21,466

Persons arrested for drunkenness are chiefly residents of large towns, and it is only natural to expect that, with an increase in the population of the towns, there should be an increase in the apprehensions for drunkenness. As the subjoined table shows, however, the total number of cases in 1905, and the proportion of population, are the second lowest of any year in the decennial period.

Too much stress, however, could not be laid upon the figures in the table if there were not other evidence of the decrease of drunkenness, as a word of instruction from the Inspector-General of Police could, according to its tenor, increase or decrease the number of persons apprehended on this charge; but the decline in proportion of arrests has been coincident with a marked decrease in the consumption of intoxicants, so that it may be fairly assumed that drunkenness is on the wane. The number of apprehension and summons cases for drunkenness in each of the ten years 1896-1905 is given below :—

Year.	Apprehensions for Drunkenness.			Summons Cases for Drunkenness.	Total Cases of Drunkenness.	Cases of Drunkenness per 100,000 of Population.
	Males.	Females.	Total.			
1896	15,311	3,572	18,883	616	19,499	1,535
1897	15,131	3,542	18,673	653	19,326	1,498
1898	15,378	3,346	18,724	673	19,397	1,478
1899	15,974	3,326	19,300	638	19,938	1,495
1900	16,721	3,697	20,418	585	21,003	1,551
1901	16,739	3,841	20,580	543	21,123	1,540
1902	16,714	4,291	21,005	572	21,577	1,548
1903	16,801	4,366	21,167	670	21,837	1,535
1904	15,378	4,328	19,706	734	20,440	1,413
1905	16,121	4,578	20,699	767	21,466	1,452

The figures quoted in the foregoing table refer to total cases, both as regards apprehensions and summonses. In the next table will be found the actual number of distinct persons apprehended for drunkenness during each of the years 1901 and 1905, males and females being shown separately in age groups:—

Age Groups.	1901.			1905.		
	Males.	Females.	Total.	Males.	Females.	Total.
10 years ...	1	...	1	...	...	...
11 " ...	1	...	1	...	...	...
15 " ...	1	1	2	...	...	...
16 " ...	6	1	7	4	4	8
17 " ...	31	12	43	33	6	39
18 " ...	95	14	109	69	15	84
19 " ...	135	33	168	100	37	137
20 " ...	132	30	162	130	30	160
21—24 " ...	977	204	1,181	1,036	257	1,293
25—29 " ...	1,943	371	2,314	1,757	392	2,149
30—34 " ...	2,074	423	2,497	1,679	391	2,070
35—39 " ...	2,164	352	2,516	1,839	404	2,243
40—44 " ...	2,225	283	2,508	1,936	344	2,280
45—49 " ...	1,688	196	1,884	1,697	237	1,934
50—54 " ...	1,291	148	1,439	1,298	136	1,434
55—59 " ...	755	70	825	804	88	892
60—64 " ...	631	70	701	633	83	716
65—69 " ...	435	63	498	422	56	478
70—74 " ...	194	19	213	197	12	209
75—79 " ...	63	6	69	76	5	81
80 and over ...	25	3	28	20	7	27
Not stated	6	...	6	7	2	9
Total............	14,873	2,299	17,172	13,737	2,506	16,243

There has been a considerable decrease in the actual number of persons arrested for drunkenness during the last five years, the total falling from 17,172 in 1901 to 16,243 in 1905. This decrease was, however, confined to the males, the actual number of females arrested in 1905 being slightly in excess of that for 1901.

The number of convictions obtained for drunkenness, with and without disorderly conduct, during the year 1905, was 24,003. In 6,033 of these cases, or 25·1 per cent., the offence was committed between 8 a.m. on Saturday and 8 a.m. on Sunday; and in 2,318 other cases, or 9·7 per cent. of the total, the offence was committed between 8 a.m. on Sunday and 8 a.m. on Monday. The Liquor (Amendment) Act, 1905, which came into force on the 1st January, 1906, contains some stringent clauses regarding the sale of liquor at licensed premises. It is believed that this Act will effect a decrease in the number of future convictions for drunkenness. Except in cases of sickness or accident, no person under the age of 18 years can be supplied with liquor, and a person sending another under the age of 14 years to licensed premises for the purpose of obtaining liquor, is liable to be fined; whilst persons under 17 years of age are not allowed in the bar of an hotel. Females under 21 years, except in the case of a wife or daughter of a publican are not allowed to serve in bars. Drunkenness or riotous conduct is not permissible on hotel premises, neither are hotels allowed to be open during the time that voting for a Parliamentary election is in progress.

Hotels are closed on Sunday, but liquor may be sold to *bonâ fide* travellers, lodgers, servants, or inmates, provided that in the case of a traveller the place where he lodged at on the previous night was at least 20 miles distant if in the County of Cumberland, or at least 10 miles if in the country districts. A publican is not, however, compelled to serve a traveller. The police records show that there have been few instances during the year 1906 in which the law regarding Sunday selling has been violated. The number of convictions obtained for breaches of the Liquor Act during the year 1905 will be found below :—

Convictions for Selling—	Metropolitan.	Country.	New South Wales.
Liquor on Sunday, and keeping premises open during that day	158	98	256
During prohibited hours other than upon Sunday	34	40	74
Liquor without a license	12	13	25
Adulterated liquor under Liquor Act	8	...	8
Total convictions obtained	212	151	363

On page 522 will be found the number of public houses licensed in the State, and also the number of colonial wine licenses current during the last few years.

The average consumption per inhabitant of spirits, wine, and fermented liquors, at intervals since 1891, is given in the following table; also the total quantity of all classes of intoxicants consumed, expressed in terms of proof spirit. It will be seen that the consumption of intoxicants per inhabitant has declined during the period covered by the table, the quantity in 1905 being over 25 per cent. less than in the first year shown :—

Year.	Spirits.	Wines.	Beer.	Equivalent in Alcohol (proof).
	galls.	galls.	galls.	galls.
1891	1·11	0·84	11·42	2·84
1895	0·73	0·64	9·02	2·09
1899	0·75	0·67	10·21	2·27
1903	0·79	0·67	9·55	2·20
1904	0·78	0·68	9·00	2·11
1905	0·77	0·75	8·92	2·11

The question of the relative prevalence of drunkenness, as tested by the number of persons arrested or summoned for that offence in the different States, has received no little attention, and it has been made to appear that New South Wales, in this regard, holds a bad pre-eminence. The total cases of drunkenness and the number per 100,000 of population in the different States and in New Zealand, for the year 1905, were as given below :—

State.	No of cases of Drunkenness.	Per 100,000 of population.
New South Wales	21,466	1,452
Victoria	14,458	1,192
Queensland	6,638	1,259
South Australia	2,358	629
Western Australia (1904)	3,542	1,488
Tasmania (1904)	580	321
New Zealand	11,013	1,266

In comparing the drunkenness returns of the various States, it may be pointed out that an argument founded solely on the number of cases is misleading, for a great deal depends upon the state of the law and the manner in which it is administered. The extent of the area supervised must also be taken into consideration, for it is evident that the law will be less strictly enforced in the sparsely-settled districts of Queensland, South Australia, and Western Australia, than in the more thickly populated parts of Australia. The quantity of intoxicants consumed per head of the community is, perhaps, a better guide, though not always a safe indication unless the manners and customs of the people are also considered; but where the habits of communities are so similar as is the case in regard to the Australasian provinces, the consumption per head is a tolerably fair test.

Of late years there has been a growing tendency to regard drunkenness, not so much in the light of a crime as of a disease. It has been frequently advocated that the dipsomaniac should not be sent to gaol to herd with criminals and have his weakened faculties subjected to their evil influence, but should be sent to an asylum specially built for his reception. The present system of dealing with the offence has proved to be practically worthless, as the same faces are constantly reappearing before magistrates, in some cases more than a hundred times in the course of a few years. During 1905, out of a total of 16,243 distinct persons arrested for drunkenness, 3,388, or over 20 per cent., were brought up more than once. Of these, one man was arrested 32 times, another 22 times; while four women appeared, respectively, 27, 26, 24, and 23 times in the course of the year. An examination of the criminal records of the State, over a period of years, also disclosed the rather startling fact that more than 40 per cent. of the gaol population commenced their career with an imprisonment on a charge of drunkenness.

INQUESTS.

In all cases of violent or unnatural death, death resulting from accident, sudden death, death in a hospital, and in cases of suicide, it is the duty of the Coroner for the district to hold an inquiry into the cause if he has reasonable grounds for believing that death was due to violence or other unnatural means, and for that purpose he is empowered to order the exhumation of a body if necessary, to summon jurors and witnesses, and to commit for trial a person found guilty by the jury of the crime of manslaughter or murder. Under the Coroners' Court Act, 1904, a Coroner is empowered to hold an inquisition, sitting alone, but upon request of a relative, the secretary of any society of which the deceased was a member, or on the order of the Minister of Justice, a jury of six is called. Every death which takes place in gaol or in a lock-up must be investigated, and inquests must also be held on the bodies of all persons executed, and the jury find whether the sentence was duly carried out. In a district where no coroner has been appointed, or the officer is unable to hold the usual inquest, a magistrate may hold an inquiry; but owing to the fact that he is not empowered to commit a suspected person for trial, he must terminate the inquiry in all cases where facts are disclosed which point to the criminality of a person, and direct the police to prosecute at the nearest police court. Stipendiary or Police Magistrates have powers of Coroners in all parts of the State, except the metropolitan police district. The numbers of deaths during 1905, the causes of which were investigated by Coroners or Magistrates, were 897 of males and 264 of females, giving a total of 1,161 inquests and magisterial inquiries. Of the 1,161 deaths, the verdicts of the courts were that 771 were caused by violence, and of these cases 132 males and 36 females were found to have committed suicide.

It is provided that when any real or personal property has been destroyed or damaged by fire, the Coroner exercising jurisdiction in the district where the fire has occurred shall, if he consider the case to be a fit one for investigation, hold an inquiry with the object of ascertaining the origin of the fire. The procedure is similar to that followed in inquests held in connection with cases of death. The Coroner can, in accordance with the decision of his jury, commit a person for trial on a charge of arson. Inquiries were held during 1905 into the origin of 121 fires, and the verdict returned was one of accident in 10 cases, of arson in 28, of insufficient evidence in 82 cases, and of carelessness in 1 case.

Higher Courts—Criminal Jurisdiction

A Judge of the Supreme Court presides over the Central Criminal Court of Gaol Delivery held at Sydney. All prisoners are tried by a jury of twelve, chosen by lot from the panel provided by the Sheriff. In capital cases the right to challenge, both by the Crown and by the accused, is limited, except for cause shown, to twenty jurors; and in cases other than those in which the sentence of death may be imposed, whether felonies or misdemeanours, the number challenged cannot exceed eight. Under the Criminal Law and Evidence Amendment Act of 1891, every person charged with an indictable offence, and the husband or wife, as the case may be, of the person so charged, shall be competent, but not compellable, to give evidence in every court on the hearing of such charge. Prior to the passing of this Act, such a privilege was only granted to those charged with bigamy. At the close of the case for the prosecution, an accused person may also make a statement in his defence without rendering himself liable to examination thereupon, either by Counsel for the Crown or by the Court. The "Accused Persons Evidence Act of 1898" provides that it shall not be lawful to comment at the trial of any person upon the fact that he has refrained from giving evidence on oath on his own behalf. The verdict of the jury must be unanimous, for, even if eleven jurors were agreed, their verdict could not be accepted. If the jury disagree in the first instance, they may be locked up until they either come to a verdict or are discharged by the Court. If no verdict is returned, the prisoner is liable to be tried again by another jury.

In addition to the supreme, civil, and criminal sittings of the Court held in Sydney, the Judges go on circuit once in each half-year, and hold Courts of Gaol Delivery, called Circuit Courts, for dealing with the more serious class of criminal cases, especially those in which the capital penalty is involved, and for hearing civil causes at certain circuit towns, viz.:—In the north at Newcastle, Maitland, Tamworth, Armidale, Grafton, and Lismore; in the west at Bathurst and Dubbo; and in the south at Goulburn, Wagga Wagga, Albury, Deniliquin, and Hay.

The Courts of Quarter Sessions are presided over by Chairmen, who also perform the duties of Judges of the District Courts. There are seven Chairmen of Quarter Sessions; two of these preside over the Courts in the metropolitan district, and one each in the following districts:—Southern and Hunter, south-western, northern, north-western, and western. All offences, except those involving the capital penalty, are within the jurisdiction of the Court. On the trial of prisoners at Quarter Sessions, the Chairman, at the request of the prisoner's counsel, must reserve questions of law for the consideration of the Supreme Court, or he may so act *motu proprio.*

During the year 1905 there were 1,331 males and 155 females committed for trial in the Higher Courts of the State. Of these 1,486 persons, 1,454 were committed by magistrates, before whom they had been brought up at Petty Sessions; and 32 by Coroners, 17 being accused of murder, 9 of manslaughter, and 6 of arson. The number of persons committed during any one year does not necessarily coincide with the number placed on trial during the same period, as some persons committed at the end of one year do not make their appearance until the following year. Excluding those against whom the Attorney-General declined to file a bill, there were 1,479 persons recorded in the returns of the Higher Courts of the State during 1905, 1,346 being males and 133 females. The following table shows the manner in which these accused persons were dealt with :—

How dealt with.	Central Criminal and Circuit Courts.		Courts of Quarter Sessions.		Total Higher Courts.		
	Males.	Females.	Males.	Females.	Males.	Females.	Total.
Convicted—							
Sent to Gaol or Reformatory......	77	5	551	37	628	42	670
Liberated as First Offenders under "Crimes Act"	10	1	88	13	98	14	112
Acquitted	60	10	325	47	385	57	442
Jury disagreed	2	...	10	4	12	4	16
Fined	...	...	4	...	4	...	4
Bound over	3	...	20	10	23	10	33
Not proceeded against	10	2	186	4	196	6	202
Total persons	162	18	1,184	115	1,346	133	1,479

Classifying these accused persons according to the nature of the offences with which they were charged, it will be found that, both in the case of males and of females, offences against property only are the most numerous, followed by offences against the person. Below will be found a statement of the offences of which the 1,479 persons dealt with in higher courts during 1905 were accused, with the rates per 100,000 of population :—

Offences.	Males.		Females.		Total.	
	Number	Per 100,000 of population.	Number	Per 100,000 of population.	Number	Per 100,000 of population.
Offences against the person	334	42·6	32	4·6	366	24·7
Offences against person and property	220	28·1	10	1·4	230	15·6
Offences against property only....................	502	64·0	68	9·8	570	38·5
Forgery and offences against the currency........	79	10·1	10	1·4	89	6·0
Offences against good order	11	1·4	2	0·3	13	0·9
Offences not included in preceding	200	25·5	11	1·6	211	14·3
Total	1,346	171·7	133	19·1	1,479	100·0

The following statement shows the character of the principal offences for which prisoners were tried during each year since 1896, and affords material for interesting study:—

Offences.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.
Murder	12	5	7	8	10	8	8	13	13	11
Attempted murder	3	4	5	3	3	9	5	9	8	15
Manslaughter	13	22	20	14	14	29	8	21	15	25
Wounding maliciously, unlawfully	100	101	119	112	125	91	95	100	87	108
Rape, and attempts to commit	19	17	19	19	10	16	5	26	21	22
Carnal knowledge of a girl under 14, and attempts	16	17	18	18	21	18	17	18	20	21
Indecent assaults	42	67	52	40	44	45	46	42	44	38
Unnatural offences	12	10	16	30	13	18	13	18	13	18
Arson, and attempts at	22	11	15	14	16	10	23	15	23	13
Robbery with violence, including garrotting	30	36	21	49	47	51	23	33	40	30
Break, enter, and steal, or attempts	128	140	93	134	110	118	130	179	167	150
Larceny and receiving stolen property	200	260	228	213	191	191	224	276	236	257
Stealing in a dwelling, including burglary	69	70	72	48	57	77	73	93	104	71
Forgery and uttering	63	90	65	72	47	52	55	63	76	89
Stealing from the person	26	34	34	43	64	72	39	35	71	33
False pretences	46	56	35	41	33	36	45	48	40	39
Embezzlement	37	22	11	13	17	15	26	25	24	37
Horse-stealing	64	60	58	47	60	60	61	68	79	51
Cattle-stealing	51	28	24	29	29	37	29	21	23	20
Sheep-stealing	55	44	26	30	26	23	29	69	30	16
Perjury	16	6	15	12	8	7	16	16	34	22
Other offences	354	230	251	209	198	234	256	248	239	307
Total Committals	1,368	1,330	1,190	1,202	1,148	1,217	1,226	1,432	1,407	1,479

The scope of this work does not admit of the particulars of offences being set out in great detail, but if the returns be analysed it will be found that, as experience has shown elsewhere, the seasons have a marked effect upon the conduct; besides this, however, there is apparently a periodicity in crimes sufficiently curious to afford food for speculation. Perhaps the greatest examples of this periodicity are in connection with crimes of blood, *i.e.*, those of murder, manslaughter, and maliciously wounding; and with crimes against females, and unnatural offences.

GAOLS.

There are in New South Wales 58 gaols of all kinds; of these, 6 are principal gaols, 13 minor gaols, and 39 police gaols. The total number of cells in all gaols is 2,418. The average daily number in confinement during 1905 was 1,863.

Great changes have taken place during the last few years in connection with the treatment of prisoners, and it is considered by competent authorities that New South Wales is quite abreast of the latest and most enlightened penological methods. Formerly, punishment in gaol partook somewhat of the nature of revenge for wrong-doing; but under the more humane system at present in vogue, the idea of revenge has sunk far into the background, and the strongest possible stress is laid on the moral reformation of offenders. Of course, there are still defects to be remedied—for instance, the present method of dealing with the inebriate is recognised as absolutely futile, while the problem of how best to deal with the professional criminal still awaits solution. With regard to the latter question, however, the Habitual Criminals Act passed in 1905, and to which further reference is made later, may be looked upon as a step in the right direction. The principle of restricted association has now been in force for several years, and results have amply justified its adoption. Before the introduction of this system, prisoners were classified in various groups, determined principally by the length of sentence, and their free association was doubtless productive of much mutual contamination. Under the present system, however, confinees take meals in their cells, and their unavoidable association at work, religious instruction, and exercise is conducted under the closest supervision. It may here be stated that one result of the reorganisation scheme has been a considerable reduction in the gaol expenditure, notwithstanding that many hundreds of cells at night are lighted up to a reasonable hour, and other necessary expenditure is incurred in carrying out the non-association system. All prisoners serving not less than one month, also prisoners on trial and remand, are allowed the privilege of reading wholesome and interesting books. In all the prison libraries of the State there are 19,604 books in circulation, and 2,542 in stock, making a total of 22,146 volumes. In the library at Darlinghurst there are 2,403 volumes, with an average weekly issue for the year of 482.

In order to ensure the proper working of the "restricted association" principle the gaols have been graded in various classes. Thus, Parramatta Gaol is reserved chiefly for old offenders; the more hopeful class are sent to Bathurst and Maitland; Goulburn receives first-offenders; and sexual perverts and offenders against good order are dealt with at suitable smaller establishments. Portions of the country prisons are set apart for short-sentenced males, while Darlinghurst and Biloela receive metropolitan offenders of this class. Further and improved modifications will be introduced on the completion of the penitentiary at Little Bay.

On the 31st December, 1905, there were 1,678 prisoners, exclusive of debtors, in confinement, thus distributed :—

Prisons.	Males.	Females.	Total.
Principal gaols	1,226	148	1,374
Minor gaols	208	15	223
Police gaols	74	7	81
Total	1,508	170	1,678

The total number of prisoners received under sentence into the various gaols throughout the State during the year 1905 was 10,736, exclusive of debtors. Of these, 6,177 were received at Darlinghurst Gaol, Sydney.

The following table gives the number of distinct prisoners received into gaol under sentence for the last ten years with the proportion per 100,000 of mean population :—

Year.	Males.	Females.	Total.	Per 100,000 of population.
1896	8,308	1,237	9,545	751
1897	7,457	1,250	8,707	675
1898	7,509	1,174	8,683	662
1899	6,881	1,084	7,965	597
1900	6,667	1,046	7,713	570
1901	6,812	1,160	7,972	581
1902	6,524	1,103	7,627	547
1903	6,761	1,177	7,938	558
1904	6,154	1,168	7,322	506
1905	5,917	1,107	7,024	475

As the table shows, there has been a marked decrease in proportion to population of persons received into gaol during the ten-year period 1896-1905, and for the last year the proportion is the lowest on record; but how far this is due to more enlightened penological methods, to the spread of education, and to general improvement in social condition, it is difficult to estimate.

The number of prisoners in confinement at the close of each year during the last decennial period will be found below. Taking one year with another, these figures may be accepted as fairly representing the average daily number for each year given. Prisoners have been classified under two heads—those under sentence, and those awaiting trial, debtors being excluded.

Year.	In Confinement.			Under sentence.	Awaiting trial.
	Males.	Females.	Total.		
1896	2,137	217	2,354	2,216	138
1897	2,015	242	2,257	2,136	121
1898	1,894	187	2,081	1,934	147
1899	1,798	186	1,984	1,864	120
1900	1,712	185	1,897	1,791	106
1901	1,605	207	1,812	1,696	116
1902	1,646	189	1,835	1,698	137
1903	1,641	175	1,816	1,711	105
1904	1,672	205	1,877	1,719	158
1905	1,508	170	1,678	1,569	109

The largest number of prisoners at any age-period is of those whose ages range from 25 to 29 years, although proportionately to the population this group only shows the second highest ratio of offenders, with 1,345 per 100,000 estimated inhabitants at this age, followed by 30 to 34 years, with 1,330; and 20 to 24 years, with 1,044; proportionately to the population, prisoners of ages 35 to 39 years are in the highest ratio, having 1,531 per 100,000 of population.

The following table gives the number and ages of persons sentenced to penal servitude, labour, or imprisonment during the year 1905. Sentence of death was recorded against 6 male and 2 female prisoners, but in every instance the sentence was commuted. With regard to the males, it was commuted to penal servitude for life in four instances, and in the other two cases the time was limited to fourteen and fifteen years respectively. The two females had their sentences commuted to imprisonment for life with hard labour.

Included with the persons sentenced to be imprisoned without labour are 1 male and 1 female, who were ordered to be imprisoned during the Governor's pleasure, 1 female received into gaol while awaiting securities, and 78 males imprisoned until order complied with:—

Ages	To Death.		To Penal Servitude.		To Imprisonment.						Total Prisoners Sentenced.		
					With Labour.			Without Labour.					
	Males.	Females.	Males.	Females.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
8—14 years	..	..	..	..	32	2	34	1	..	1	33	2	35
15—19 ,,	2	..	1	..	653	109	762	7	..	7	663	109	772
20—24 ,,	1	..	8	..	1,041	362	1,403	34	2	36	1,084	364	1,448
25—29 ,,	2	..	25	..	1,194	376	1,570	46	3	49	1,267	379	1,646
30—34 ,,	..	1	17	..	879	499	1,378	40	3	43	936	508	1,439
35—39 ,,	1	..	6	..	915	614	1,529	29	2	31	961	616	1,567
40—44 ,,	..	..	12	..	812	428	1,240	28	2	30	852	430	1,282
45—49 ,,	..	1	3	..	614	208	822	32	1	33	649	210	859
50—54 ,,	..	..	4	..	562	137	699	27	..	27	593	137	730
55—59 ,,	..	..	2	..	312	81	393	13	3	16	327	84	411
60 and over	..	..	4	..	447	66	513	29	1	30	480	67	547
Total	6	2	82	..	7,461	2,882	10,343	286	17	303	7,835	2,901	10,736

Taking the returns from all the gaols, it will be found that 7,024 distinct persons were imprisoned during the year 1905, of whom 5,917 were males, and 1,107 were females. The following table shows, in age groups, the number of distinct persons of the male sex who were convicted once and more than once during 1905, any convictions they may have undergone in previous years being disregarded. In the figures given the returns from all the gaols have been combined, and each person debited with the total number of sentences received, whether served in one prison or in more than one:—

Ages.	Males Imprisoned during 1905, with Ages and Number of Times Convicted.													
	Total.	1	2	3	4	5	6	7	8	9	10	11	15	21
8 years	1	1	..	..	..	..	..	..	..	..	..	..	..	..
10 "	2	2	..	..	..	..	..	..	..	..	..	..	..	..
11 "	5	5	..	..	..	..	..	..	..	..	..	..	..	..
12 "	2	2	..	..	..	..	..	..	..	..	..	..	..	..
13 "	6	6	..	..	..	..	..	..	..	..	..	..	..	..
14 "	17	17	..	..	..	..	..	..	..	..	..	..	..	..
15 "	32	26	5	1	..	..	..	..	..	..	..	..	..	..
16 "	71	62	6	3	..	..	..	..	..	..	..	..	..	..
17 "	122	104	14	2	2	..	..	..	..	..	..	..	..	..
18 "	146	119	21	5	1	..	..	..	..	..	..	..	..	..
19 "	175	147	18	8	2	..	..	..	..	..	..	..	..	..
20 "	163	136	20	5	2	..	..	..	..	..	..	..	..	..
21—24 "	731	615	94	11	7	3	1	..	..	..	..	..	..	..
25—29 "	993	806	139	28	10	5	3	1	..	1	..	..	..	..
30—34 "	727	584	100	29	7	5	2	..	..	..	..	..	..	..
35—39 "	695	545	98	30	11	4	3	1	2	..	..	..	1	..
40—44 "	617	482	88	29	5	7	1	1	1	..	2	1	..	..
45—49 "	470	365	65	24	8	5	..	2	..	..	..	1	..	..
50—54 "	387	287	62	14	14	3	1	..	3	2	..	..	..	1
55—59 "	206	155	26	12	4	3	2	..	2	..	1	..	1	..
60—64 "	157	126	19	5	4	1	1	..	1	..	..	..	..	..
65—69 "	114	85	23	4	1	1	..	..	..	..	..	..	..	..
70—74 "	48	37	5	3	..	2	..	1	..	..	..	..	..	..
75—79 "	20	17	2	1	..	..	..	..	..	..	..	..	..	..
80 and over	8	5	2	..	..	..	1	..	..	..	..	..	..	..
Not stated	2	2	..	..	..	..	..	..	..	..	..	..	..	..
Total..	5,917	4,738	807	214	78	39	15	6	9	3	3	2	2	1

As the table shows, 65 boys under 16 years of age were received into gaol during 1905. In some instances only a portion of the sentence would be served in prison, and the offender would then be removed to a reformatory, the magistrates being allowed to exercise their discretion in regard to the punishment imposed. It is confidently asserted that the operations of the "Neglected Children and Juvenile Offenders Act of 1905" will be responsible for a great decrease in juvenile crime, since the police have extensive powers in regard to neglected and wandering children. The need of an efficient Truancy Act is, however, still apparent, as it is universally recognised that truancy often forms the first step in a downward career.

A remarkable feature of the foregoing table is the large number of persons sent to gaol more than once during the year. The prisoners with two or more convictions numbered 1,179, while their convictions were 3,097. The list of second convictions commences with boys of 15 years, and ends with a man who had passed his eightieth year; the third convictions are headed by a lad of 15, and so on, as the list shows. One man in the age-group 50-54 was convicted no less than 21 times. The number of males under 21 years of age sent to gaol was 742, and of these 115 were convicted more than once. As is the case with the females, by far the largest proportion of those sent to gaol more than once during the year consists of drunkards and vagrants. The records clearly show the hopeless futility of the present method of dealing with drunkenness, as the same faces often reappear before the magistrates scores of times within a few years.

There were 1,107 females imprisoned during the year 1905, of whom the large proportion of 513, or 46·3 per cent., were convicted more than once. The convictions of girls under 21 years of age numbered 96, and of these 34 were imprisoned more than once. One woman was convicted as many as 22 times during the year, another had 20 convictions recorded against her, and one was convicted 19 times during the year. The following table shows the number of females imprisoned, their ages, and number of convictions during the year :—

Ages.	Females Imprisoned during 1905, with Ages and Number of Times Convicted.																					
	Total.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	22
11 years	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
14 ,,	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15 ,,	4	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16 ,,	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
17 ,,	6	4	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
18 ,,	19	14	4	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
19 ,,	36	20	9	2	..	1	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..
20 ,,	28	16	6	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
21—24 ,,	154	92	32	12	6	3	3	1	1	..	..	1	1	1	..	..	..	..	1	..	..	..
25—29 ,,	149	91	18	12	5	4	4	4	..	4	1	3	..	..	1	1	1	..	..	..	..	..
30—34 ,,	170	81	34	14	9	10	5	2	1	3	1	1	4	1	1	..	1	1	1	..	..	..
35—39 ,,	187	89	30	16	8	11	3	7	2	7	5	..	1	2	3	..	..	1	..	1	1	..
40—44 ,,	145	69	25	17	8	7	3	4	2	1	3	1	1	..	1	..	1	1	..	..	..	1
45—49 ,,	78	36	19	8	2	2	4	3	..	2	..	..	..	1	..	..	..	..	1	..	..	..
50—54 ,,	58	37	9	2	2	2	1	..	1	..	1	2	1	..	..	..	..	..	..	..	..	..
55—59 ,,	31	13	7	5	1	1	1	..	2	..	..	1	..	..	..	..	..	..	..	..	..	..
60—64 ,,	17	9	2	1	4	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
65—69 ,,	11	5	5	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
70—74 ,,	6	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
75—79 ,,	4	3	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
80 and over	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total	1,107	594	203	96	46	42	25	23	9	17	11	9	8	5	6	1	3	3	3	1	1	1

The following table shows the ages of distinct persons under the age of 21 years received into gaol during the five years 1901-5. It will be seen that the figures for 1905 are only slightly in excess of those for the first year shown in the table, despite the growth of population in the interval :—

Ages.	1901.			1902.			1903.			1904.			1905.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
Under 10 years	1	..	1	6	..	6	5	1	6	1	..	1	1	..	1
10 years	2	1	3	3	..	3	4	..	4	2	..	2	2	..	2
11 ,,	5	..	5	7	..	7	5	1	6	3	..	3	5	1	6
12 ,,	4	..	4	11	..	11	5	1	6	4	..	4	2	..	2
13 ,,	12	2	14	8	6	14	9	2	11	11	2	13	6	..	6
14 ,,	10	..	10	8	1	9	12	1	13	13	1	14	17	1	18
15 ,,	23	3	26	21	6	27	40	4	44	38	2	40	32	4	36
16 ,,	76	7	83	59	14	73	67	2	69	65	4	69	71	2	73
17 ,,	108	15	123	114	32	146	122	21	143	118	6	124	122	6	128
18 ,,	132	35	167	140	30	170	156	24	180	163	28	191	146	19	165
19 ,,	195	29	224	164	30	194	189	35	224	156	29	185	175	35	210
20 ,,	137	27	164	139	98	237	170	40	210	172	27	199	163	28	191
Total	705	119	824	680	217	897	784	132	916	746	99	845	742	96	838

Particulars regarding the Carpenterian Reformatory for Boys and the Industrial School for Girls will be found in the chapter dealing with Social Condition.

The persons who figure in the preceding tables as having been convicted several times during the year are the drunkards, the vagrants, and the petty thieves. Naturally the more serious offenders are rarely afforded an opportunity of appearing before the Courts twice in one year.

A very large proportion of the prisoners received into gaol on summary conviction consists of persons who were imprisoned in default of payment of fines. Doubtless many of these were too poor to pay the fines, so that it would appear that their poverty was more accountable for their imprisonment than the actual breach of law committed by them. Under the Justices Act, 1892, when a person is imprisoned for non-payment of an amount adjudged to be paid by the conviction on order of a Justice, he may pay under prison rules a portion of the fine, and be relieved of a proportionate part of the imprisonment to which he was sentenced. The following table shows that large numbers of prisoners avail themselves of the provisions of the Act, and many days of the sentences have been remitted :—

	1902.	1903.	1904.	1905.
Persons committed to gaol in default of payment of fines	8,062	8,379	7,681	7,347
Prisoners subsequently released after paying portion of fines	1,008	1,081	1,287	1,247
Amount received at gaol as part-payment of fines	£2,198	£2,088	£2,370	£2,065
Days prisoners would have served if portion of fines had not been paid	30,768	32,958	31,539	33,487
Days remitted by part-payment of fines	20,179	20,198	22,035	22,389

The punishments awarded to offenders vary from nominal imprisonment to the supreme penalty of death. Prisoners under sentence of hard labour are, after examination by the medical officer, given such work as the prison authorities consider comes within the meaning of the sentence. Penal servitude is not awarded for a shorter term than three years. In the case of male prisoners it is taken to mean hard labour on the roads or other public works, and in the case of female prisoners, hard labour in gaol. The punishment is practically the same as hard labour. Prisoners undergoing a sentence of imprisonment without labour are treated differently from others, and if they entirely maintain and clothe themselves they are exempted from any work; otherwise they contribute to their own support by performing such labour as may be provided. Under section 436 of the Crimes Act, where a prisoner has been convicted of a felony, attended with violence to the person, or committed by the offender when armed, or by means of any threat, or by putting in fear, the Court may direct that he may be kept in irons for a portion of his term of imprisonment, but not extending beyond the first three years.

The effect of punishment in reforming criminals, or in restraining them from the commission of crime, is a subject upon which much has been written. It is certain that in New South Wales there has been a great decrease in crime, but it seems equally certain that this satisfactory state of things is due to an improvement in the material and intellectual condition of the whole community, and not to any deterrent effect which punishment has had upon the criminal; indeed, as far as concerns the minor offences—such as drunkenness, vagrancy, and petty thieving—the deterrent effects of the present system of punishment are by no means obvious.

A summary of sentences imposed upon offenders affords little clue to the gravity of the offences committed; thus, for simple larceny, the sentences of imprisonment, in the case of males, ranged from under 2 days to 5 years and under 10; for common assault, from under 2 days to 2 and under 5 years; for maliciously injuring property, from under 2 days to 2 years and under 5; for receiving stolen property, from 1 month to 5 years and under 10; for begging alms, from under 2 days to 6 months and under 12; and for perjury, from 1 month to 2 years and under 5. The great anomaly disclosed by these sentences might disappear if the circumstances attending each individual case were considered, but the scope of this work only admits of the facts in regard to the sentences themselves being recorded.

There has been considerable discussion in recent years concerning the sentencing of prisoners. Some persons argue in favour of progressive sentences, while it is urged by others that the present system savours too much of mere revenge for wrong-doing, and the principle of indeterminate sentences is advocated. Under the latter method prisoners would be detained in gaol until such time as their moral reformation was complete, while the hopelessly incorrigible would suffer total deprivation of liberty. How to give practical effect to such a scheme presents obvious difficulties; nevertheless, it seems only right for society to be protected more efficiently against the depredations of confirmed malefactors. The Comptroller-General of Prisons is of opinion that persons who now go to gaol for minor offences, or for offences of a quasi-criminal nature, could very well be treated under a system of probation, which would be much more effective and less costly than the present system of sending such persons to gaol. The Habitual Criminals Act, which came into operation in 1905, gives the judges the power of declaring a prisoner to be an habitual criminal if such prisoner has been previously convicted of a similar offence, as mentioned in the Act, on at least three, or in certain cases two occasions, either within or without the State. The definite part of the sentence is served as an ordinary prisoner, after which he is detained until, in the opinion of the authorities, he is deemed fit to be at large. During 1905 only two prisoners were dealt with under this Act, so that nothing definite can, perhaps, yet be said as to its efficacy; but the provisions of the Act have been made known by the gaol authorities to prisoners, and the likelihood of these criminals being called upon to suffer loss of liberty, under the statute, should they again be convicted, has already, without doubt, made a great impression on the minds of the criminal classes.

The following summaries give a classification for 1905, according to the length of the sentences and the nature of the offences; the two previous tables show the number of distinct persons sentenced, while the figures in the two following statements refer to the number of offences punished, the same person in some instances having been sentenced several times in the course of the year:—

Offences.	Male Prisoners. Total Offences.	Imprisonment for—											
		2 days and under.	3 days and under 1 week.	1 week and under 1 month.	1 month and under 6.	6 months and under 12.	1 year and under 2.	2 years and under 5.	5 years & under 10.	10 years & under 15.	During Governor's pleasure.	Until order complied with.	Death
Offences against the person ..	523	4	3	93	308	88	26	29	13	1	1	1	
Offences against person and property	148	..	..	2	7	45	34	37	17	6	..	..	.
Offences against property only	1,795	35	25	293	985	253	67	87	18	2	..	..	..
Forgery and offences against the currency	60	..	..	..	11	19	14	9	6	1	..	..	..
Offences against good order ..	4,117	846	609	1,596	985	77	2	2	..	..	..	..	..
Offences not included in the preceding	1,192	149	142	369	390	84	30	1	..	..	..	77	..
Total offences committed by males	7,835	1,034	779	2,353	2,686	496	173	165	54	10	1	78	6

It will be seen that the sentence of death was passed on 6 males, but in all cases it was commuted to imprisonment for various terms. Of the persons included in the column "Until order complied with," 76 were wife and child deserters against whom there were unsatisfied maintenance orders, and 1 person had neglected to comply with orders under the Customs Act.

The classification of sentences according to their length and the nature of the offences for which females suffered imprisonment in 1905 is given below. It will be seen that sentence of death was passed on 2 females during the year. Both of these prisoners were charged with murder; but in neither instance was the extreme penalty carried out, the sentences being commuted to hard labour for life. One prisoner appears in the group 5 to 10 years, the offence in this case being manslaughter.

The terms for which women are sentenced are as a rule much shorter than those of men, as their offences generally speaking are much lighter. As shown in the subjoined statement, the total offences of females during 1905 amounted to 2,901. Of these, 2,487, or over 86 per cent., represented offences against good order, such as drunkenness, riotous behaviour, using bad language, and vagrancy :—

Offences.	Female Prisoners. Total Offences.	Length of Sentences.									
		2 days and under.	3 days and under 1 week	1 week and under 1 month.	1 month and under 6.	6 months and under 12.	1 year and under 2.	2 years and under 5.	5 years and under 10.	Indefinite.	Death.
Offences against the person ...	43	2	...	18	13	2	...	3	1	2	2
Offences against person and property	1	...	...	...	...	1	...	...	...	...	...
Offences against property only	220	4	8	58	123	21	3	3	...	...	...
Forgery and offences against the currency	2	...	...	...	...	1	1	...	...	...	...
Offences against good order ...	2,487	279	463	1,227	476	42	...	...	...	...	...
Offences not included in the preceding	148	25	35	71	14	3	...	...	...	...	...
Total offences committed by females	2,901	310	506	1,374	626	70	4	6	1	2	2

Allusion has already been made to the number of persons with more than one conviction recorded against them during 1905. It is interesting to compare these figures with the records of previous years, which are given below for the last ten years. The table also gives a statement of the average number of offences committed by each prisoner who had been convicted more than once during each year :—

Year.	Prisoners convicted more than once each year.					
	Prisoners sent to Gaol more than once.		Offences Committed.		Average number of Offences Committed.	
	Males.	Females.	Males.	Females.	Males.	Females.
1896	1,751	539	4,679	2,363	2·7	4·4
1897	1,478	514	3,944	2,115	2·7	4·1
1898	1,545	485	4,233	2,054	2·7	4·2
1899	1,511	470	4,177	1,932	2·7	4·1
1900	1,494	484	4,258	2,310	2·8	4·8
1901	1,416	487	3,891	2,322	2·7	4·8
1902	1,354	495	3,677	2,373	2·7	4·8
1903	1,459	541	3,870	2,625	2·7	4·9
1904	1,240	495	3,404	2,356	2·7	4·8
1905	1,179	513	3,097	2,307	2·6	4·5

From the evidence of the foregoing table there would appear to be a constant reappearance of the same faces before the courts to account for so high an average of reconvictions. The proportion of habitual offenders, if those with previous convictions may be so termed, is remarkable, and will perhaps be better illustrated by the following table than by the one just given. The returns only include convictions within the year named, convictions in a previous year being disregarded. If all convictions had been included, the proportion would be about 4 per cent. higher. It must be borne in mind, however, that the figures are considerably swollen by the constant reappearance in gaol of persons charged with the pseudo-crime of drunkenness. Out of 7,024 persons committed to prison during 1905, 1,798, or over 25 per cent., were incarcerated on this charge:—

Year.	Percentage of prisoners with previous convictions.	Year.	Percentage of prisoners with previous convictions.
1896	23·5	1901	23·9
1897	22·5	1902	24·2
1898	23·4	1903	25·2
1899	24·9	1904	23·7
1900	25·6	1905	24·1

Under the Prisons Act, 1899, a Visiting Justice is appointed to visit each prison at least once in every week. Judges of the Supreme Court can at any time visit and examine any prison, and similar power to examine is given all Justices of the Peace. The Visiting Justice is empowered to hear and determine all complaints which may be made against a prisoner of disobeying the rules of the gaol, or of having committed any offence, and may pass a sentence of confinement in a solitary cell for a term not exceeding seven days. In cases of persistent insubordination, a charge upheld before two or more Justices of the Peace renders the prisoner liable to a sentence of close confinement for one month; and if the culprit is a prisoner convicted of felony, or serving a sentence of hard labour, a punishment of personal correction may be awarded. The prison returns show that whipping was not administered in 1905. The number of punishments inflicted upon refractory prisoners during the last ten years is given as follows:—

Year.	Prisoners punished in gaols			Percentage of total prisoners punished.
	Solitary confinement.	Other punishments.	Total.	
1896	924	247	1,171	12·2
1897	1,146	226	1,372	12·4
1898	1,262	216	1,478	13·5
1899	1,166	120	1,286	12·8
1900	913	52	965	10·0
1901	951	118	1,069	13·4
1902	991	40	1,031	13·5
1903	850	36	886	11·2
1904	719	29	748	8·1
1905	538	9	547	6·1

The figures show that the proportion of prisoners punished in 1905 was the lowest during the last decennial period.

There were 75 persons—63 males and 12 females—imprisoned for debt during the year 1905. As the time of detention, as a rule, only extended over a short period, the number of debtors in confinement at any one time was not large, and on the 31st December, 1905, there were only 7 males in gaol for debt. The number of persons sent to gaol for debt during each of the last ten years will be found in the following table:—

Year.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
1896	52	2	54	1901	49	2	51
1897	50	1	51	1902	57	1	58
1898	81	4	85	1903	53	6	59
1899	53	1	54	1904	62	7	69
1900	59	3	62	1905	63	12	75

The dietary scale in New South Wales prisons comprises bread, maize-meal, meat, vegetables, salt, sugar, and rice or barley. For males the quantity of bread supplied ranges from 12 oz. to 24 oz. daily, according to length of sentence and quality of labour performed, the minimum quantity being supplied to prisoners serving sentences not exceeding six months, and the maximum to prisoners serving sentences with harder labour, such as road-work, excavating, stone-cutting, blacksmithing, &c. The quantity of meat supplied ranges from 4 oz. to 16 oz. daily. To females, 8 oz. of bread and 4 oz. of meat are supplied where a sentence not exceeding six months is being served, and these quantities are increased to 16 oz. of bread and 12 oz. of meat where harder labour, such as washing, is performed. For prisoners in solitary confinement, and for idle and ill-conducted prisoners, the daily allowance is restricted to 16 oz. of bread. Debtors, prisoners under civil process, those awaiting trial, under remand, or detained as witnesses for want of bail, receive a diet of 16 oz. bread, 8 oz. maize-meal, 16 oz. meat, 12 oz. vegetables, and small quantities of salt, rice, and sugar. Children of female prisoners are also supplied with rations, those under 2 years of age receiving 4 oz. bread, 1½ pint milk, and 1 oz. sugar, while from 2 to 8 years the allowance is 8 oz. bread, 4 oz. meat, 1 pint milk, and 1 oz. sugar.

The following table gives the number of the prisoners employed in the principal and minor gaols at the end of 1905, and those engaged in the principal callings. In some of the gaols there are no means of finding suitable employment of a profitable and useful nature, otherwise the number shown could be very much increased; and it must also be remembered that there are many prisoners whose services are not available for labour, such as those whose sentences do not carry hard labour, and those exempt from work on account of medical and other reasons. The net value of the labour done during 1905 amounted to £22,508; but this sum is taken to refer exclusively to labour of a productive character.

Carpenters and assistants	29	Bookbinders	11
Painters	10	Writers	3
Blacksmiths and assistants ...	17	Washing and Gardening.........	69
Tinsmiths	16	School and Store assistants......	3
Masons	1	Hospital attendants...............	3
Marble workers....................	12	Working outside	67
Labourers	93	Needlework and Knitting	123
Brushmakers	6	Sweepers and cleaners...........	168
Matmakers.........................	49	Cooks' Assistants..................	71
Shoemakers	86	Wood and water gang........ ...	24
Tailors..............................	130	Other employments	492
Hatmakers	3	Total employed...........	1

At most of the gaols considerable attention is paid to agriculture, the produce of vegetables and forage during the year being valued at £1,157.

Besides the foregoing there were at the close of the year 1905 as many as 199 prisoners who were not employed. The reasons for such exemption will be found in the following statement:—

In hospitals	22	Incapable	3
In cells	4	Received too late to be set to work	11
Under separate treatment	3	Not under sentence (including debtors)	116
Under medical treatment	19		
Exempt from work	19		
Prisoners' delegates	2	Total	199

Persons whose cases have not yet been disposed of are allowed to see their legal advisers and others who may visit them in reference to their trial. It is not required that they shall wear prison clothing; and other privileges, consistent with safe custody, are granted to them. Persons under examination are not allowed to have any communication made to them while in the prison except by their legal advisers, unless such a proceeding is specially sanctioned by the Justice conducting the examination.

By good conduct and industry, prisoners may be recommended for a remission of sentence, in accordance with the following scale and conditions:—Where the sentence exceeds twelve months, a remission of one-fourth to prisoners having no previous conviction of six months or upwards; with one such previous conviction, a remission of one-fifth; more than one, a remission of one-sixth. Female prisoners in this class having no previous conviction of any kind may receive a remission of one-third of their sentences. In the case of sentences over three, but not over twelve, months, prisoners who have not served a sentence of or exceeding forty-eight hours, may receive a remission of one-fourth of their sentence; with one such conviction, a remission up to one-fifth; two or more, a remission not exceeding one-sixth. No remission is granted where the sentence is less than three months, nor on any period passed in separate treatment. The remission scale does not affect sentences commuted from capital convictions, where the prisoner may petition for release after serving twenty years, or, in some cases, at a less period. Generally speaking, the treatment which favours the lesser offender has been adopted in other parts of gaol routine—as, for instance, in the earning of gratuities, the progressive stages, the allotment of privileges, and indulgences.

Under the Crimes Act a prisoner under sentence may be granted a written license to be at large within specified limits during the unexpired portion of his sentence. Sureties are required, unless under exceptional circumstances, for good behaviour and observance of the conditions of the license. The prisoner who is liberated is required to report himself periodically to the police, and is liable to have his license cancelled and to be committed to gaol to undergo the remainder of his sentence, by any breach of the conditions upon which he was released. This system was first adopted in September, 1891, and at the end of 1905 it had been put in force in 278 cases—those of 269 males and 9 females. Of the 278 licenses issued, there were, on 31st December, 1905, 66 still in force, 188 had expired, and in 22 cases the balance of the sentence had been remitted and the license cancelled, while in only 2 cases was the license-holder returned to gaol to complete his sentence.

When the neglected state in which many of the prisoners are received is considered, it may be said that the death-rate in gaols is light, and it shows, moreover, signs of decreasing. More especially in the country districts, the gaols are frequently called upon to receive persons in the last stages of disease and aged and infirm paupers, whose proper destination should rather have been a hospital or an asylum. This causes an undue inflation of the prison death-rate, and it may be said that in a large percentage of the total deaths during 1905 the cause should be looked for in diseases originating prior to reception in gaol. A comparison between the death-rate in gaols and that of the general population is difficult to make, but it may be said generally that the death-rate of all persons received into gaol is at present not greater than that of the general population of like ages, while the death-rate of habitual criminals is largely below the average. In the following table the number of deaths, exclusive of those resulting from executions, is given for 1880 and subsequent periods, together with the death-rate per 1,000 of the average number of prisoners in confinement during the year:—

Year.	Deaths.			Death-rate per 1,000 persons in confinement.
	Males.	Females.	Total.	
1880	37	...	37	18·85
1885	39	11	50	19·90
1890	24	2	26	10·84
1891	37	3	40	15·86
1892	36	4	40	15·27
1893	28	6	34	13·42
1894	22	2	24	9·49
1895	19	3	22	8·61
1896	28	2	30	12·29
1897	22	...	22	9·47
1898	20	1	21	9·40
1899	31	2	33	15·71
1900	15	3	18	9·02
1901	21	3	24	12·74
1902	15	...	15	8·28
1903	21	3	24	12·32
1904	11	2	13	6·92
1905	12	1	13	7·75

It will be seen from the above that, with the exception of the year 1904, the death-rate in 1905 was the lowest recorded during the last twenty-six years.

CAPITAL PUNISHMENT.

In the early days of settlement the spectacle of judicial executions was extremely common. Offences which are now summarily dealt with by magistrates, and deemed sufficiently punished by imprisonment for two or three months, were, in some cases, punishable by death. This barbarous system lasted until about the year 1832, when the offences of stealing from a dwelling money or goods to the value of £5, and of killing or stealing horses, cattle, or sheep, were removed from the category of capital crimes. Five years later the punishment of death was abolished in the following cases:—Riotous destruction of buildings and machinery, riotous assembling, rescue of a person convicted of murder, seducing a person in the Royal Navy from duty, inciting to mutiny, administering unlawful oaths purporting to bind the person taking the same to commit any treason or murder, breaking prison, escaping from lawful custody more than once, smuggling while armed, shooting at any vessel, or maliciously shooting or maiming any officer of the Navy or Revenue Service. Executions have been less numerous of late years than formerly, the dread penalty being carried out in only a small proportion of cases wherein the death sentence has been pronounced. The number of executions since 1825 is given herewith. In five years only have there been no executions. Four females have been hanged during the period in question :—

Year.	Convictions.	Executions.	Year.	Convictions.	Executions.	Year.	Convictions.	Executions.
1825	54	9	1852	10	5	1879	21	1
1826	72	21	1853	4	2	1880	21	4
1827	93	29	1854	11	6	1881	6	2
1828	106	28	1855	12	5*	1882	14	3
1829	112	52	1856	7	...	1883	9	1
1830	136	50	1857	9	4	1884	8	2
1831	143	32	1858	9	1	1885	11	3
1832	156	12	1859	10	7	1886	22	2
1833	135	31	1860	11	5*	1887	4	4
1834	148	44	1861	32	2	1888	17	2
1835	142	40	1862	18	6	1889	4	3*
1836	79	26	1863	16	6	1890	1	1
1837	90	12	1864	5	2	1891	6	3
1838	130	19	1865	10	3	1892	4	1
1839	53	22	1866	20	6	1893	8	5
1840	13	8	1867	19	4	1894	8	5
1841	27	18	1868	13	5	1895	7	1
1842	47	13	1869	6	...	1896	4	1
1843	22	8	1870	3	...	1897	7	3
1844	22	8*	1871	11	3	1898	5	1
1845	15	3	1872	19	3	1899	5	1
1846	11	1	1873	10	4	1900	6	1
1847	10	6	1874	14	3	1901	2	3
1848	6	5	1875	8	2	1902	...	...
1849	6	4	1876	15	4	1903	8	3
1850	5	4	1877	9	2	1904	8	1
1851	8	2	1878	12	1	1905	8	...

* One female.

During the eighty-one years embraced in the table just given, 2,388 persons were sentenced to death, and of these, 1,736 were condemned during the first eighteen years. For the whole period the executions numbered 655, of which 466 were carried out during the first eighteen years.

A study of the statistics of judicial executions in New South Wales prior to the year 1842 will make it abundantly plain that the barbarous system of taking life for insufficient cause, so far from striking terror into the hearts of would-be criminals, had the effect of lowering the moral tone of the whole community, and, therefore, of making some of its members more prone to commit the very offences which the punishment was intended to prevent. The death penalty is now imposed for murder, acts done to the person with intent to murder, and acts done to property with the like intent, carnal knowledge of a girl under the age of 10 years, and the crime of rape; it is, however, generally carried out for murder only. The following statement shows the number of convictions and executions for the offences named for a period of thirty-five years:—

Year.	Murder and Attempt at Murder.		Rape.		Year.	Murder and Attempt at Murder.		Rape.	
	Convictions.	Executions.	Convictions.	Executions.		Convictions.	Executions.	Convictions.	Executions.
1871	9	3	2	...	1889	3	3	1	...
1872	14	3	5	...	1890	1	1	...	...
1873	9	4	1	...	1891	5	3	1	...
1874	7	2	7	1	1892	4	1	...	...
1875	7	1	1	1	1893	6	5	2	...
1876	12	4	3	...	1894	7	5	1	...
1877	4	2	5	...	1895	5	1	2	...
1878	8	1	4	...	1896	4	1	...	...
1879	16	...	5	1	1897	3	2	4	1
1880	15	4	6	...	1898	4	...	1	1
1881	3	1	3	1	1899	6	...	1	1
1882	10	3	4	...	1900	6	1	1	...
1883	8	1	1	...	1901	5	2	4	1
1884	7	2	1	...	1902	2	...	1	...
1885	9	3	2	...	1903	10	3	3	...
1886	10	2	12	...	1904	10	1	5	...
1887	3	...	1	4*	1905	8	...	...	...
1888	15	2	2	...					

* Mount Rennie case; convicted in 1886.

In 1887, as the table shows, the death penalty was carried out in the case of four prisoners charged with rape. Since that year there was no further execution till the single cases in each of the years 1897, 1898, 1899, and 1901. It would be rash to argue that the executions in 1887 have exercised a salutary effect upon persons disposed to commit this crime, for there has been no diminution in the number of persons committed for trial. With more reason it might be assumed that juries are loth to convict for rape, knowing that death is the penalty assigned by law as its punishment.

POLICE.

At the end of the year 1905 the Police Force of New South Wales consisted of 2,342 men of all ranks, of whom 768 were mounted. The force, which comprises 13 superintendents, 12 inspectors, 38 sub-inspectors, 72 senior-sergeants, 145 sergeants, 336 senior-constables, 1,705 constables, and 21 detectives, is commanded by an Inspector-General, who is under the control of the Chief Secretary of the State, the police being directly in the service of the State.

The question of handing over the control of the police to local bodies has not as yet been seriously entertained in New South Wales. The latest municipal legislation (Local Government (Shires) Act of 1905) does not make any provision in this respect, and in any case it is hardly likely that definite action could be taken until the entire area of the State is incorporated.

Below will be found the number of police in the metropolitan and country districts at the close of each of the last ten years. It will be seen that with the growth of population the force is steadily increasing in strength, the present proportion being 1 police officer to every 639 inhabitants, as compared with 1 to every 682 persons ten years ago:—

Year.	Metropolitan.	Country.	Total.	Number of Inhabitants to each Police Officer.
1896	749	1,125	1,874	682
1897	754	1,143	1,897	686
1898	792	1,165	1,957	676
1899	821	1,195	2,016	667
1900	888	1,254	2,142	637
1901	909	1,263	2,172	635
1902	950	1,272	2,222	621
1903	979	1,291	2,270	627
1904	1,006	1,304	2,310	626
1905	1,048	1,294	2,342	639

The protection of life and property is not the only duty which the police are called upon to perform. On the contrary, a large portion of their time is taken up in the collection of the agricultural and stock schedules, the returns of works and manufactories, and other duties of a like character. In many cases they also act as Clerks of Petty Sessions and Warden's clerks, mining registrars, gaolers, inspectors under various Acts, collect information for electoral rolls, and fill other offices having no direct connection with police duties. A list showing the nature of all such offices held and the duties performed has been given in the annual report of the Police Department, and the headings number no less than fifty-six. With a view to making better provision for the regulation of traffic within the Metropolitan Police district, the regulation and control of vehicles, horses, and the owners, drivers, and conductors thereof, the Metropolitan Traffic Act was passed during the year 1900, and its entire administration given over to the police. Although the police generally are empowered to control the street traffic, &c., in 1905 there were 81 police officers specially instructed to do this work. The duties of the police vary so much in the different States that any comparisons which neglect to take this factor into consideration are considerably vitiated thereby. Differences in area and physical characteristics must also be allowed for in dealing with the figures shown in the following table, which exhibits the strength of the police force, exclusive of trackers, in each State and New Zealand at the close of the year 1905:—

State.	Police.			To each Police Officer.	
	Metropolitan.	Country.	Total.	Inhabitants.	Square miles.
New South Wales	1,048	1,294	2,342	639	133
Victoria	824	671	1,495	811	59
Queensland	260	651	911	583	734
South Australia (1905-6)	185	187	372	1,007	2,429
Western Australia	140	349	489	511	1,995
Tasmania	72	162	234	704	112
New Zealand	296	371	667	1,304	157

A comparison of the cost of the police forces of the various States will be found below. The greater proportion of mounted troopers in those States where very large and thinly-populated districts have to be patrolled tends to make the average cost somewhat higher than in the other provinces:—

State.	Police Force.			Total Cost of Police Force.	Average Cost per Constable.			Average Cost per head of Population.	
	Metropolitan.	Country.	Total.						
	No.	No.	No.	£	£	s.	d.	s.	d.
New South Wales	1,048	1,294	2,342	434,684	185	12	1	5	10
Victoria	824	671	1,495	269,339*	180	3	2	4	5
Queensland	260	651	911	158,325*	173	15	10	5	11
South Australia (1905-6)	185	187	372	76,288	205	1	6	4	0
Western Australia	140	349	489	123,681*	251	7	9	9	10
Tasmania	72	162	234	35,692	152	10	5	4	0
Commonwealth	2,529	3,314	5,843	1,098,009	187	18	4	5	5
New Zealand	296	371	667	133,823	200	12	8	2	11
Australasia	2,825	3,685	6,510	1,231,832	189	4	5	5	0

* Year ended 30th June. † Exclusive of Northern Territory.

COST OF POLICE AND PRISON SERVICES.

The following table shows the amount expended in maintaining the police and prison services of New South Wales during the last five years, and also the amount of fines paid into the Consolidated Revenue, and the net return from prison labour:—

Expenditure and Revenue.	1901.	1902.	1903.	1904.	1905.
Expenditure—	£	£	£	£	£
Police	401,353*	416,379*	431,631*	435,974*	434,684*
Penal establishments	123,164	126,323	136,800	119,874	100,947
Total	524,517	542,702	568,431	555,848	535,631
Revenue—					
Fines	13,823	14,243	14,272	15,152	16,636
Net return from prison labour	14,220	15,714	15,916	19,452	22,508
Total	28,043	29,957	30,188	34,604	39,144
Net Expenditure	496,474	512,745	538,243	521,244	496,487
	s. d.	s. d.	s. d.	s. d.	s. d.
Per Inhabitant	7 3	7 4	7 7	7 2	6 9

* Financial year ending subsequent 30th June.

It is to be understood that the value of prison labour set down in the above table represents labour of a productive character only.

EXTRADITION.

The Imperial statutes in force in New South Wales for the surrender of fugitive criminals are the Extradition Acts of 1870 to 1895, and the Fugitive Offenders Act of 1881. The former provides for the surrender to foreign States of persons accused or convicted of certain crimes within the jurisdiction of such States, and for the trial of criminals surrendered to British dominions. Treaties for the extradition of fugitive criminals exist between His Majesty's Government and the Governments of France, Germany, Austria-Hungary, Brazil, Spain, Italy, Belgium, the Netherlands, Denmark, Sweden and Norway, Switzerland, Haiti, the United

States of America, Argentine, Columbia, Ecuador, Guatemala, Mexico, Portugal, Roumania, Russia, Salvador, Tonga, Uruguay, Bolivia, Chile, Liberia, Luxemburg, Monaco, San Marino, Servia, Turkey, Egypt, Cyprus, China, Japan, Corea, Morocco, Siam, Inland Persia, Persian Coast and Islands, African Protectorates, Pacific Ocean and Islands, Nicaragua. In proceedings taken in New South Wales under this Act, the fugitive is brought before a Stipendiary or Police or special Magistrate, authorised by the Governor-General under the Commonwealth "Extradition Act, 1903," who hears evidence on oath, and, if satisfied that the person is liable to be extradited, makes out a warrant to that effect. At the hearing of the case, the Consul for the country to which the person charged belongs, the Crown Solicitor, and the Inspector-General of Police are represented. If a warrant is made out, the prisoner is sent to Darlinghurst Gaol for fifteen days prior to extradition, during which interval he may apply to the Supreme Court for a writ of *habeas corpus*. During the ten years ended 1905, there were altogether 10 persons extradited, all of whom were escapees from the French penal settlement of New Caledonia.

Under the Fugitive Offenders Act, 1881, provision is made for the surrender from the United Kingdom to a British possession or *vice versa*, or from one British possession to another, of fugitives charged with the perpetration of crimes which are, in the part of His Majesty's dominions where they are committed, punishable by imprisonment with hard labour for twelve months or more, or by some greater penalty. Persons apprehended under the Act are dealt with at a Magistrate's Court, and their cases are included in the figures relating to the business transacted at Magistrate's Courts, and not in the returns relating to the Extradition Court.

During 1905, 26 fugitive offenders—of whom 25 were males and 1 female—were arrested in other parts of His Majesty's dominions, or in foreign countries, and returned to New South Wales. Of these, 5 were summarily convicted before magistrates, and 15 were committed to higher courts, the other 6 cases being discharged.

There were also 42 fugitive offenders from other portions of His Majesty's Dominions, arrested in New South Wales, and brought up at Magistrates' Courts during the year. Of these, 14 were remanded to Victoria, 17 to Queensland, 4 to New Zealand, 3 to South Australia, while 4 were discharged.

DECREASE IN CRIME.

There are two ways available for testing the increase or decrease in crime: the first, which is by comparing the number of arrests with the whole population of the country, may be said to be a test of the willingness or otherwise of the people to obey the laws; the second is a comparison of the persons committed for trial by jury with the whole population, and as all serious offenders are so tried, this may be looked upon as a test of the prevalence of serious crime. In making comparisons of this kind, it must be borne in mind, first, in regard to apprehensions, that as new laws are continually being made, and the large proportion of such laws attach the penalty of fine or imprisonment to their breach, the number of offences for which a person is liable to be apprehended has constantly been increasing; and second, that the general tendency of late years has been for magistrates to deal summarily with a large proportion of the cases submitted to them. Hence it is quite possible that crime might neither be increasing nor diminishing, and yet the returns show an increase of apprehensions and a decrease of committals. Taking all things into consideration, the tables given hereunder may be accepted as showing that crime has largely decreased. The first table shows, in quinquennial periods, the mean population, the average number of apprehensions, and the proportion of these to the general population for the last six years:—

Period.	Mean Population.	Apprehensions.	
		Average Annual.	Per 100,000 of Population.
1870–74	526,733	19,422	3,687
1875–79	633,255	28,837	4,554
1880–84	802,712	41,262	5,140
1885–89	1,000,744	39,406	3,938
1890–94	1,174,963	37,854	3,222
1895–99	1,291,563	36,145	2,799
1900–05*	1,411,310	38,677	2,741

* Six years.

It cannot be claimed that 2,741 apprehensions per 100,000 of population is a low average, but it is a marked improvement on the rates of previous years. The comparison made above has reference to the whole population; but as few persons under 15 years of age commit crimes, children under that age have been excluded from the following statement, which compares the periods 1879-82, 1889-92, and 1899-1902, these periods being selected on account of the number in each age-group being accurately determinable from the results of the last three Census enumerations. The following figures relate to males:—

Age-group.	1879–82.		1889–92.		1899–1902.	
	Average Annual Arrests.	Per 100,000 of Population.	Average Annual Arrests.	Per 100,000 of Population.	Average Annual Arrests.	Per 100,000 of Population.
15—19 years	1,734	4,543	1,882	3,468	1,727	2,449
20—29 "	8,884	11,829	9,939	8,433	6,500	5,465
30—39 "	8,141	14,358	8,848	9,565	6,462	6,149
40—49 "	5,945	13,614	5,803	9,920	5,097	6,499
50 years and over	5,061	11,347	5,045	7,315	4,304	4,680

In every age-group there has been a decided fall in the proportion of arrests, but the improvement is most marked in the higher age-groups, which every year are becoming more largely composed of Australian-born. The decline in the proportion of females arrested is even more noticeable than amongst the males. The following figures relating to females are on the same basis as those in the preceding table: —

Age-group.	1879–82.		1889–92.		1899–1902.	
	Average Annual Arrests.	Per 100,000 of Population.	Average Annual Arrests.	Per 100,000 of Population.	Average Annual Arrests.	Per 100,000 cf Population.
15—19 years	484	1,288	463	850	247	349
20—29 "	1,813	3,023	1,814	1,807	1,081	893
30—39 "	2,018	5,002	1,600	2,500	749	847
40—49 "	1,471	5,410	1,035	2,531	604	1,049
50 years and over	1,118	4,122	740	1,637	449	662

In considering the figures in this and the preceding table, regard must be paid to the fact that the arrests refer to distinct persons for the period 1899-1902 only, whereas in the earlier years they relate to all arrests; but even when due allowance has been made on this score, it will be found that the decline is sufficiently notable.

Turning to the committals to the higher Courts, and the convictions there, an even more decided decline is noticeable; and as the committals represent the more serious types of offences, the decline must be looked upon as specially satisfactory:—

Period.	Committals.		Convictions.	
	Annual Average.	Per 100,000 of Population.	Annual Average.	Per 100,000 of Population.
1870–74	1,134	215·3	644	122·3
1875–79	1,506	237·8	881	139·1
1880–84	1,693	210·9	1,044	130·1
1885–89	1,539	153·9	885	88·4
1890–94	1,479	125·9	916	78·0
1895–99	1,393	107·9	829	64·2
1900-05*	1,378	97·6	811	57·5

* Six years.

It will be seen that the fall has been nearly continuous over the whole period, convictions for serious offences being proportionately much less than they were thirty-six years ago, notwithstanding the fact that population has more than doubled during the interval.

It may be taken, then, as clearly proved that there has been a great decrease in crime during the last thirty-six years. The reform, if it may be so termed, has come about owing to a general improvement in the community itself, and not to the reform of individuals by reason of the deterrent effect of punishment inflicted.

Perhaps the most serious defect in the treatment of offenders arises from the fact that any reformative effect from detention in gaol, until within comparatively recent years, ceased with the prisoner's discharge. The Prisoners' Aid Association does good work in the direction of finding employment for prisoners on the completion of their sentences, in taking charge of gratuities earned by them in gaol, and in various other ways. During the four years in which the Association has been in existence, 1,153 prisoners have been assisted, of whom only 119 have been reconvicted. The Salvation Army organisation possesses several excellent institutions where friendless persons of this class are received and cared for. In many instances, however, released prisoners simply seek their criminal friends, and again qualify for speedy readmission to gaol.

CRIME IN AUSTRALASIA.

The table below shows the number of convictions in the higher Courts of Australasia, together with the proportion per 100,000 of population for the year 1905. It will be seen that, relatively, Western Australia occupies the highest place with 65 per 100,000, followed by New South Wales with 55, Queensland with 54, and New Zealand with 50. Tasmania shows the lowest proportion, with 13 per 100,000. The peculiar position of Western Australia, where the gold-fields have attracted a very mixed population, is, of course, responsible for the high rate shown there, while Queensland and New South Wales provinces, with the next largest floating populations, also show comparatively high rates. It is difficult, however, to draw any rigid deductions as to the relative prevalence of serious crime in the various States, as the jurisdiction of the higher Courts is by no means uniform:—

State.	Convictions in Higher Courts.	
	Number.	Per 100,000 of Population.
New South Wales	819	55
Victoria	454	37
Queensland	288	54
South Australia	98	26
Western Australia	163	65
Tasmania	24	13
Commonwealth	1,846	46
New Zealand	435	50
Australasia	2,281	47

South Australia and Tasmania have no intermediate Courts like the Quarter Sessions of New South Wales and the District Courts with criminal jurisdiction of some of the other States, and many persons who would be committed to higher Courts in New South Wales are convicted in the Magisterial Courts of South Australia and Tasmania. Further, in Victoria, magistrates have a much wider jurisdiction than in New South Wales, and many offenders who are summarily convicted in the former State would have to be committed to a higher tribunal in the latter province.

HIGH COURT OF AUSTRALIA.

The High Court Procedure Act of 1903 provides that appeals to the High Court from judgments of the Supreme Court of any State, or any other Court of any State, from which, at the establishment of the Commonwealth, an appeal lay to the Queen-in-Council, shall be instituted by notice of appeal in a certain prescribed form. The appellant may appeal from the whole or any part of a judgment, but his notice of appeal must give full particulars in this regard. Details respecting the mode of instituting appeals, &c., are given at length in Section IV of the Act.

THE SUPREME COURT—CIVIL JURISDICTION.

The chief legal tribunal of the State is the Supreme Court, which is at present composed of seven Judges, viz., a Chief Justice and six Puisne Judges. Civil actions are usually tried by a jury of four persons, but either party to the suit, on cause shown, may apply to a Judge in Chambers to have the cause tried by a jury of twelve. Twice the number of jurors required to sit on the case are chosen by lot, from a panel summoned by the Sheriff, and from that number each of the parties strike out a fourth, the remainder thus selected by both parties forming the jury who are to try the case. The jury are constituted the judges of the facts of the case only, being bound to accept the dicta of the Judge on all points of law. From the Court thus constituted an appeal lies to what is called the "Full Court," sitting *in Banco*, which is generally composed of at least three of the Judges. The Chief Justice, or in his absence the senior Puisne Judge, presides over the Full Court, which gives its decision by majority. The circumstances under which new trials are granted are: Where the Judge has erroneously admitted or rejected material evidence; where he has wrongly directed the jury on a point of law; where the verdict of the jury is clearly against evidence; or where, from some other cause, there has evidently been a miscarriage of justice.

Provision is made for appeals to the Privy Council, but any suitor wishing to carry his cause before the supreme tribunal of the Empire must first obtain leave so to do from the Supreme Court. The amount in dispute must be at least £500, or affect the construction of a New South Wales statute. In other cases, application for leave to appeal must be made to the Privy Council itself. The British Government has appointed Chief Justice Way, of South Australia, to a seat on the Judicial Committee of the Privy Council, so that he may bring to the deliberations of the Committee his knowledge of the laws, especially the land laws, of the States. So far as New South Wales is concerned, there have been, during the ten years ended 1905, 67 appeals to the Privy Council in common law, and 27 in Equity; 1 appeal in common law was made during 1905.

The Chief Justice has also an extensive jurisdiction as Commissary of the Vice-Admiralty Court, in which all cases arising out of collisions, &c., in Australian waters, are determined. One of the Puisne Judges acts as his deputy; but the Supreme Court, as such, has no jurisdiction in Admiralty cases.

One of the Puisne Judges also acts as Chief Judge of the Equity Court, from whose decrees an appeal lies to the Full Court, and thence to the Privy Council.

Affairs in Bankruptcy are also dealt with by a Puisne Judge, assisted by the Registrar. An appeal can be made to the Full Court against the Judge's decision.

Another Puisne Judge presides over the Divorce Court, in which cases are usually tried without a jury, an appeal lying to the Supreme Court.

The Equity Judge formerly represented the ecclesiastical jurisdiction of the Supreme Court, and heard and decided all applications for the probate of wills and for letters of administration, and also determined suits as to the validity, &c., of wills. By the Probate Act of 1890 this jurisdiction was vested in the Supreme Court in its Probate jurisdiction, and the business transferred to such Judge as might be appointed Probate Judge. Motions for rehearing cases, adjudicated in this Court, are sometimes made before the Supreme Court or Privy Council.

A Judge can only be removed from office upon the address of both Houses of Legislature. Upon permanent disability or infirmity, or after fifteen years' service, a Judge is entitled to retire from the Bench with a pension, the amount of which, as well as of his salary, is secured and regulated by various Acts.

A person eligible for admission as a solicitor, provided he has not been admitted in England, Ireland, or Scotland, or in any State of the Commonwealth of Australia, must have been articled to some solicitor practising in New South Wales, and have served for a term of five years, or in the case of a person who has taken a degree in Arts before entering into articles, a term of three years, and must have passed the examinations of a Board, consisting of two barristers and four solicitors, appointed annually for that purpose by the Judges of the Supreme Court. The admission of a solicitor can only take place on the last day of any of the four terms into which the judicial year is divided. A solicitor who ceases to practise for two years continuously is not allowed to resume practice without obtaining an order from the Court. A barrister who has been in practice as such for five years, having caused himself to be disbarred, can, under the Legal Practitioners' Act, 1898, be admitted without examination as a solicitor. Under the provisions of the same Act a solicitor is competent to appear, and has the right of audience, in all Courts of New South Wales. The Court can suspend or remove from the roll of solicitors any person who, in its opinion, has been guilty of misconduct or malpractice.

The Board for approval of qualified persons to be admitted as barristers of the Supreme Court of New South Wales, is formed under the Legal Practitioners' Act, 1898, and consists of the Judges of the Supreme Court, the Attorney-General for the time being, and two elected members of the Bar. Applicants must have been students-at-law for three, or in the case of graduates, for two years, and have passed all examinations prescribed by the Board. A solicitor who has been in practice for not less than five years, and who has removed his name from the roll of solicitors, is entitled to be admitted as a barrister without examination. Admission is made in open Court any day in term by any two Judges sitting together.

During the year 1905 there were 166 persons practising as barristers of the Supreme Court, while the solicitors numbered 955, of whom 574 were in Sydney, and 381 in the country.

COMMON LAW JURISDICTION OF SUPREME COURT.

The following table gives the number of writs issued and the amount for which judgment was signed in the Supreme and Circuit Courts (Common Law jurisdiction) during the last ten years. The number of writs issued includes cases which were subsequently settled by the parties; but the total amount involved in these claims is not, of course, included in the sum for which judgment was signed. The amounts for judgments signed include taxed costs in all cases where the judgments have been completed at the end of the year, and relate to undefended and tried cases only. During 1905 the total bills of costs amounted to £29,591, but from this a sum of £7,301 was taxed off, leaving the net costs at £22,289. The Court costs of taxation amounted to £459:—

Year.	Writs issued.	Judgments signed.
	No.	£
1896	3,775	388,382
1897	3,146	436,506
1898	2,901	302,569
1899	3,014	309,085
1900	2,983	296,841
1901	2,890	309,346
1902	3,533	475,161
1903	4,030	285,801
1904	3,973	220,305
1905	3,719	176,930

The number of causes set down and tried is shown below:—

Year.	Causes set down.	Not proceeded with.	Referred to Arbitration.	Causes Tried.				
				Verdict for Plaintiff.	Verdict for Defendant	Disagreement of Jury.	Non-suited.	Total.
	No.	No.	No.	No.	No.	No.	No.	No.
1896	399	179	4	154	45	2	15	216
1897	370	147	...	151	50	1	21	223
1898	296	110	4	125	34	5	18	182
1899	302	83	3	154	32	5	25	216
1900	252	89	1	117	29	3	13	162
1901	280	117	1	116	28	1	17	162
1902	264	86	...	114	40	6	18	178
1903	300	102	4	131	39	3	21	194
1904	266	87	7	119	38	3	12	172
1905	260	89	2	102	49	5	13	169

The Commercial Causes Act, 1903, has provided a more expeditious method for the trial of commercial causes, and for purposes consequent on or incidental to that object. Under this statute either party to a Supreme Court common-law action may apply to have such action placed on the list of commercial causes. The Judge decides whether the action is to be so entered, and from such order there is no appeal.

EQUITY JURISDICTION.

The Equity Act, 1901, consolidated enactments relating to the practice, procedure, and powers of the Supreme Court in its equity jurisdiction. The transactions of the Equity Court during the last ten years were as follow:—

Year.	Statements of Claims.	Statements of Defence.	Petitions.	Summonses.	Motions.	Decrees and Orders.
	No.	No.	No.	No.	No.	No.
1896	254	166	136	120	258	902
1897	222	143	108	110	234	906
1898	204	145	100	132	145	803
1899	268	154	59	116	243	822
1900	213	131	69	197	206	841
1901	131	87	58	167	159	668
1902	176	86	136	149	140	797
1903	163	91	117	175	135	806
1904	211	98	89	176	174	1,245
1905	180	88	60	192	164	1,050

PROBATE JURISDICTION.

The number of probates and letters of administration granted by the Supreme Court in its testamentary jurisdiction is shown in the following table for the last ten years:—

Year.	Probates granted.		Letters of Administration.		Total.	
	Number of Estates.	Value of Estates.	Number of Estates.	Value of Estates.	No. of Estates.	Value of Estates.
		£		£		£
1896	1,548	5,939,540	940	755,376	2,488	6,694,916
1897	1,335	5,509,935	875	415,107	2,210	5,925,042
1898	1,391	5,132,179	840	793,187	2,231	5,925,366
1899	1,560	3,855,995	945	1,207,557	2,505	5,063,552
1900	1,505	3,916,020	947	815,012	2,452	4,731,032
1901	1,676	6,240,296	981	793,163	2,657	7,033,459
1902	1,729	5,188,341	1,053	619,279	2,782	5,807,620
1903	1,787	6,345,098	980	834,784	2,767	7,179,882
1904	1,854	5,536,494	996	619,469	2,850	6,155,963
1905	1,842	6,999,863	962	714,553	2,804	7,714,416

The figures here shown, and those dealt with in the chapter on Private Finance, as given by the Stamp Duties Department, do not agree. The Court gives the gross values of estates, inclusive of such estates as, after investigation, are found not to be subject to duty, while the Stamp Duties Department returns the net values of the estates, and excludes those not subject to duty. The returns shown above are also swollen to some extent by probates taken out a second time.

INTESTATE ESTATES.

An officer is appointed under the Wills, Probate, and Administration Act, 1898, as Curator of Intestate Estates. He is empowered to apply to the Supreme Court for an order to administer the estate of any person leaving real or personal property, and no executor, widow, or next of kin resident within the jurisdiction of the Court willing and capable of acting in execution of his will or administration of his estate, or where the executors renounce probate, or the persons primarily entitled decline to apply for administration, or where probate or administration is not applied for within three months of the death of such person, and in a few other instances. The Curator pays all moneys he receives into the Colonial Treasurer's Curator of Intestate Estates Account, out of which account all proved and allowed claims are then paid. Moneys not claimed within six years are paid into the Consolidated Revenue Fund, and used for the public service of the State. A rightful claimant may afterwards, however, obtain payment thereof, but without interest, from the date of payment into the Treasury.

The number of estates opened during 1905 was 540, from which the Curator received £31,344, and paid away £15,541; while in connection with estates opened during previous years £25,700 was received, and £44,659 paid away. Commission and fees to the amount of £2,976 were paid into the Consolidated Revenue during the year. The revenue also benefited to the extent of £14,679 of unclaimed moneys, while claims amounting to £1,468 were received for moneys which had been paid into the Consolidated Revenue.

BANKRUPTCY JURISDICTION.

The Bankruptcy law is administered by a Judge in Bankruptcy; certain of the powers vested in the Judge are, however, delegated to a Registrar in Bankruptcy, and in the country districts many Police Magistrates and Registrars of District Courts are appointed as District Registrars in Bankruptcy, and have the same powers and jurisdiction as the Registrar in respect to the examination of bankrupts, the issue of summonses, &c. Appeals from decisions of the Registrar or a District Registrar are made to the Judge in Bankruptcy, who also deals with questions relating to priority of claims. When any person becomes embarrassed, or is unable to pay his debts, the law allows him to sequestrate his estate for the benefit of his creditors, or the latter may, under certain specified conditions, apply for a compulsory sequestration. An officer of the Court, termed an official assignee, is deputed by the Judge to manage the sequestrated estate. He receives 2½ per cent. commission on the amount realised, and 2½ per cent. on the amount of dividends declared. In some cases the Court may also award him special remuneration. Creditors have the power to accept, and the Court to approve, proposals for a composition, or for a scheme of arrangement, provided that it has been approved by a majority representing three-fourths of the value of all approved claims. If such a proposal has been accepted, one or two trustees may be appointed in place of, or in addition to, the official assignee. After the acceptance and approval of a composition or a scheme of arrangement, a bankrupt may have his estate released from sequestration. He is also entitled to a release when all the creditors have been paid in full, or when they have given him a legal quittance of the debts due to them. In other cases, a bankrupt may give notice, by advertisement three months from the date of sequestration, of his intention to apply for a certificate of discharge. The application is heard within thirty days of the date of the first publication of the advertisement. The Court receives a report from the official assignee, and may either grant or refuse an absolute order of discharge, or suspend the operation of the order for a certain time, or grant an order subject to conditions respecting the future earnings or income of the bankrupt.

Statistics of the transactions of the Bankruptcy Court will be found in the chapter of this work dealing with Private Finance. The matter of most interest, from a legal point of view, is the expenditure incurred in realising estates. Taking the year 1905, it will be found that costs absorbed 49 per cent. of the unsecured assets.

DIVORCE AND MATRIMONIAL CAUSES JURISDICTION.

Prior to the passing of the Matrimonial .Causes Act of 1873, the Supreme Court of New South Wales had no jurisdiction in divorce. Under that Act the chief grounds for divorce were adultery since marriage on the part of the wife, and adultery and cruelty on the part of the husband. The present Act was assented to on the 9th May, 1892, but did not come into force, owing to an informality, till the 6th August. During 1893 an amending Act (56 Vic. No. 36) was passed. Under these Acts petitions for divorce can be granted for the following causes, in addition to those already mentioned :—*Husband v. Wife.*—Desertion for not less than three years; or by refusing to obey an order for restitution of conjugal rights; habitual drunkenness; and neglect of domestic duties for a similar period; being imprisoned for three years and upwards, and still in prison, under a commuted sentence for a capital crime, or under sentence to penal servitude for seven years and upwards; attempt to murder or inflict grievous bodily harm, or repeated assaults and cruel beatings during one year preceding the date of the filing of the petition. *Wife v. Husband.*—Adultery, provided that at the time of the institution of the suit the husband is domiciled in New South Wales; desertion for not less than three years, or by refusing to obey an order for restitution of conjugal rights; habitual drunkenness for a similar period, together with cruelty or neglect to support; being imprisoned for three years and upwards, and still in prison, under a commuted sentence for a capital crime, or under sentence to penal servitude for seven years and upwards, or having within five years undergone sentences amounting in all to not less than three years; attempt to murder, or inflict grievous bodily harm, or repeated assaults and cruel beatings within one year previously. To entitle either party to seek relief on any of these grounds, he or she must have been domiciled in the State for three years and upwards at the time of instituting the suit, and must not have resorted to the State for the purpose of having the marriage dissolved. When a wife seeks for a decree on the ground of three years' desertion, if she was domiciled in New South Wales when the desertion commenced, she shall not be deemed to have lost her domicile by reason of her husband having thereafter acquired a foreign domicile.

In addition to the principal causes for which a divorce may be obtained, judicial separation may be granted for desertion without cause extending over two years. Petitions of nullity of marriage may be granted in cases of marriages which are void by the law of the land, or in which some statutory requirements have not been observed, or in which one of the parties is incapable of performing the duties of marriage, or joined in the marriage ceremony through coercion or threats or mental incapacity. The law also provides for suits for the restitution of conjugal rights. Before such a suit can be brought, there must have been a request of a conciliatory character to the other party to return to cohabitation.

Further particulars relating to divorce will be found in the chapter dealing with Vital Statistics.

DISTRICT COURTS.

District Courts have been established for the trial of civil causes where the property sought to be recovered or the amount claimed does not exceed £400, and in cases where title to land is in question, where the value of the land does not exceed £200. They are presided over by Judges who are specially appointed for the purpose, and who also perform the duties of Chairmen of Quarter Sessions, in which capacity they are competent to try all prisoners except such as are charged with capital crimes. District Courts sit during ten months of the year in the metropolis, and they are held twice a year in all important country towns. The Judge is not ordinarily assisted by a jury, but in cases where the amount in dispute exceeds £20, either of the parties may, by giving notice to the Registrar of the Court, have a jury consisting of four or twelve men summoned. On questions of law, and in respect to the admission or rejection of evidence, an appeal lies to the Supreme Court.

The number of suits brought in the District Courts of the State, and the mode in which they were tried, are given in the following table for the year ended March, 1906 :—

District.	Causes tried.	Causes settled without hearing, struck out, or discontinued.	Judgment for plaintiff by default, or confession, or agreement.	Causes pending and in arrear.	Total causes commenced.	Total amount sued for.	Causes tried. Verdict for— Plaintiff.	Defendant.	Costs of the Suits.
	No.	No.	No.	No.	No.	£	No.	No.	£
Metropolitan............	378	383	587	439	1,787	47,340	278	100	4,024
South-western	92	111	97	45	345	10,155	79	13	900
Western..................	123	117	79	76	395	12,568	101	22	1,145
Southern and Hunter	141	166	96	49	452	9,673	125	16	678
North-western	39	54	47	47	187	5,785	30	9	433
Northern	176	166	93	86	521	14,841	150	26	2,047
Total	949	997	999	742	3,687	100,362	763	186	9,227

Of the 949 causes heard during 1905-6, only 40 were tried by jury. During the same period there were 9 appeals from judgments given in District Courts, of which 6 were affirmed. There were also 2 motions for new trials.

MAGISTRATES' COURTS.—SMALL DEBTS CASES.

The jurisdiction of Magistrates' Courts since the Small Debts Recovery (Amending) Act, 1905, came into force on the 28th September of that year, is extended to include any action for the recovery of any debt or liquidated demand not exceeding £50, whether on balance of account or after admitted set-off or otherwise. The total number of small debts cases brought before Magistrates' Courts during 1905 was 22,497, of which 10,197 were heard in the metropolitan courts, and 12,300 in the country courts. Of the metropolitan cases there were 8,286 in which the amount involved was under £5, 1,806 in which it was between £5 and £10, and 105 in which it was over £10. Of the cases tried in the country there were 8,297 in which the amount was under £5, 2,660 in which it was between £5 and £10, and 1,343 in which it was over £10.

LICENSING COURTS.

In the metropolitan district of the State, the Licensing Court for the sale of intoxicants consists of the Stipendiary Magistrates, with the addition of Justices of the Peace specially appointed for the purpose, bringing the number of occupants of the Bench up to seven, three of whom form a quorum; while in the country districts the local Police Magistrate and two Justices of the Peace, also specially appointed, constitute the Court. There has been an absolute decrease in the number of licensed public-houses in the metropolitan district since 1881, attributable to the operations of the Licensing Act, which came into force that year. In the succeeding year the number of licensed houses in the metropolitan area was 940, and in the country districts 2,123. For 1905 the numbers are 744 and 2,319 respectively—a decrease equal to 20·9 per cent. in the metropolis, and an increase in the country districts of 9·2 per cent. The Liquor Amendment Act of 1905, which is to be construed with the Liquor Act of 1898, undoubtedly goes far towards remedying several abuses in connection with the sale of intoxicating liquor, while it also makes better provision for the exercise of the principle of local option. The Act also contains provisions which will put a stop to many of the so-called clubs, as these institutions will have to comply with stringent regulations before they can be registered. Space prohibits more than a passing reference to the local option clauses of the Act, but it will suffice to say that electors will be able to speak in no uncertain voice with regard to the number of public houses, clubs, or wine bars that they will tolerate in their electorates.

The following table gives particulars respecting the number of public-houses, and the average number of residents to each:—

Year.	Number of Licensed Houses.			Average number of Residents in District to each House.		
	Metropolitan.	Country.	New South Wales.	Metropolitan.	Country.	New South Wales.
1896	789	2,387	3,176	516	369	405
1897	789	2,381	3,170	525	376	413
1898	789	2,364	3,153	535	386	423
1899	792	2,349	3,141	546	388	428
1900	792	2,371	3,163	606	369	428
1901	790	2,361	3,151	621	373	435
1902	787	2,345	3,132	639	380	445
1903	783	2,345	3,128	651	389	455
1904	778	2,320	3,098	662	402	467
1905	744	2,319	3,063	704	412	483

The next table, giving the number of licenses current during each of the last ten years for the sale of the wines of the State, will be found interesting:—

Year.	Metropolitan.	Country.	New South Wales.
1896	266	295	561
1897	293	299	592
1898	294	314	608
1899	345	309	654
1900	349	326	675
1901	344	331	675
1902	349	320	669
1903	363	328	691
1904	348	347	695
1905	325	357	682

PATENTS.—COPYRIGHT.—TRADE MARK CERTIFICATES.

The administration of the Patents Act of New South Wales is now controlled by the Federal authorities, under the Commonwealth Patents Act, 1903, the transfer thereto having been effected on the 1st June, 1904.

The Copyright Act became law on the 1st July, 1879. The Act is divided into four parts, dealing with the following subjects:—Part I: Literary, Dramatic, and Musical Works; Part II: Fine Arts; Part III: Designs; Part IV: Miscellaneous Provisions.

Part I provides for the registration of copyright in books or publications, as understood in the widest sense of the term, and for every new edition containing any alterations in the matter; and also for the registration of playright, or the right of representing or performing dramatic or musical productions, whether previously printed and published or not. In this State copyright is registered only for works first published here, and it commences to run on first publication, representation, or performance; but no remedy can be obtained or legal proceedings taken for anything done before registration. The term of protection is forty-two years, or the life of the author plus seven years, whichever is the longer period. Nothing blasphemous, seditious, immoral, or libellous is entitled to be registered, nor any mere advertisement. Literary works for which registration is sought must be submitted to the Registrar in a complete state as published; but dramatic or musical works, which are returned, may be in manuscript. One of the best copies issued of the first and each subsequent edition of every printed "book" published in the State must, within two months of publication, be delivered to the Public Library of New South Wales and the Librarian of the University of Sydney. The penalty for default in delivering library copies is forfeiture of the value of the book and a sum not exceeding £10. Library copies must be delivered whether the book is registered or not. Lectures receive protection without being registered, on compliance with the requirements of the Act; but lectures are public property if delivered in any University, Public School, or College, or on any public foundation, or by any individual by virtue of or according to any gift, endowment, or foundation. The registration fee is 5s.; and the fee for a copy of entry, whether required by the proprietor or anyone else, is 3s.

Part II gives copyright in paintings, drawings, works of sculpture, and engravings, including the design thereof, for fourteen years, and in photographs and the negatives thereof, for three years. The fees to be paid are:—1s. for photographs and their negatives and for chromographic cards, 5s. for other subjects, and 3s. for copies of entry. Copyright in a work of fine art which has not been executed under commission does not of necessity either follow the work or remain with the artist, but ceases to exist, unless it has been secured by agreement between the parties, signed at or before the time of sale or disposition of the original. To entitle a work to copyright it must be new and original, and must have been executed in the State.

Part III: Under this part of the Act protection can be obtained for new and original designs, not previously published in this State or elsewhere, such designs being applicable to articles of manufacture or works of art, whether intended for purposes of utility, ornament, or otherwise. The protection does not extend to the article itself, but only to the design thereof; consequently, it does not apply to any mechanical action, principle, contrivance, application, or adaptation, or to the material of which the article is composed. The substances to which designs may be applied are for registration purposes divided by the Act into fourteen classes, two years' protection being assigned to some classes, and three years to others. The design must be applied within the State. The registration fee is 10s., and copy of entry 3s., and registered designs must bear a registration mark. If protection is required in more classes than one, it can only be secured by simultaneous registration.

Part IV contains general provisions, and amongst other matters declares copyright to be personal property, assignable at law, and transmissible by request, and subject in case of intestacy to the same law of distribution as other personal property.

The Copyright Law of England is comprised chiefly in some fourteen Acts of Parliament, of an unusually obscure and conflicting character, and is extensively elaborated by judicial decisions. Under the "International Copyright Act, 1886," 49 and 50 Vic., c. 33, and the Orders in Council thereunder, the greater part of this body of law, together with the terms of the Copyright Convention of Berne, is made reciprocally applicable to Great Britain and each of her Dependencies, and to the countries that are parties to the Convention, with their colonies, namely:—Germany; Spain, with her colonies; France, with her colonies, and Algeria; Great Britain, with her colonies and possessions; Belgium, Haiti, Italy, Switzerland, Norway, Luxembourg, Monaco, Montenegro, Tunis, Denmark, and Japan, previous copyright treaties being for the most part abrogated.

Copyright when registered in a foreign country is covered by the local law within that country, and by the International Copyright Acts and the Convention thereunder, within the British Dominions, and *vice versa*.

Literary matter published in any part of the British Dominions may now be protected by copyright throughout the whole Empire, by registering the work in the country of origin if there is a local Registry, or at the London Office if there is not. Proprietorship in registered Colonial copyright can be asserted in any Court in the Empire by producing a copy of entry issued by the Copyright Office of the country of origin, and authenticated by the Governor or proper Minister of that country.

The registrations of copyright effected in New South Wales have been:—

	During 1905.	From the passing of the Act in 1879 to 31st December, 1905.
PART I. *Literature*:—		
Printing and Publishing right—		
Books	161	1,475
Periodicals	14	327
Music	9	262
Playright—		
Drama	16	130
Music	4	19
Total	204	2,213
PART II. *Fine Arts*:—		
Painting	8	123
Drawing	17	118
Sculpture	1	21
Engraving	43	261
Photography	227	1,230
Total	296	1,753
PART III. *Designs*—Useful, Ornamental, or otherwise	68	858
Grand Total	568	4,824

The yearly receipts from registration of copyrights are comparatively small. During 1905 a total sum of £140 13s. was received under the following heads:—Literature, £73 2s.; Fine Arts, £32 18s.; and Design, £34 13s.

An application for registration of a trade mark must be accompanied by a fee of £3 3s., while a transfer costs £1 1s. It is customary to allow a refund of £2 2s. where the application is either refused or withdrawn. The following table gives particulars for the last five years:—

Year.	Applications.		Transfers.	Fees received.
	Received.	Granted.		£
1901	436	380	68	1,399
1902	471	412	91	1,513
1903	412	332	208	1,447
1904	484	412	180	1,568
1905	616	413	67	1,595

PRIVATE FINANCE.

BANKING.

THE first bank to do business in New South Wales was the Bank of New South Wales, which opened in 1817, under incorporation by Act of Council, as a Bank of Issue, Discount, Deposit and Exchange. In 1825 an institution known as the Waterloo Company commenced business, and the records show that during its year of operation it had notes to the amount of 16,000 dollars in circulation. The Bank of Australia opened in 1826. Next came the Commercial Banking Company of Sydney, which appeared in 1834, followed by the Bank of Australasia, the first chartered bank as the records state, in 1835. The Union Bank of Australia is first noted in 1839. In the same year three other institutions which had a somewhat ephemeral career, viz., the Bathurst Bank, the Sydney Bank, and the Port Phillip Bank, also opened their doors. Three institutions opened in 1853—the London Chartered Bank of Australia, the English, Scottish, and Australian Chartered, and the Australian Joint Stock. The Oriental Chartered opened in 1854. In 1863 the City Bank of Sydney started operations, as well as an institution known as the Agra Bank. The Mercantile opened in 1869, and the Bank of New Zealand in 1875. The Queensland National Bank came in during 1881, and also a short-lived institution called the Sydney and County Bank. Then came the Federal Bank of Australia in 1882, the Commercial of Australia in 1884, the National Bank of Australasia in 1885, the South Australia and the New Oriental Bank in 1887, and the Bank of North Queensland in 1888.

Some of these institutions expired before the crisis of 1893, and the circumstances which precipitated that unfortunate event gave the *coup de grâce* to others. The banks not suspending payment in 1893 were the New South Wales, City, Union, Australasia, and New Zealand. Those which underwent reconstruction were the Commercial of Sydney, Commercial of Australia, the Australian Joint Stock, National Bank of Australasia, Queensland National, London Bank of Australia, English, Scottish, and Australian, and the Bank of North Queensland.

Considerable improvement might be made in the laws relating to banks and banking at present in force in the State, and the failure of several financial institutions, posing as banks, during the crisis of 1893, drew attention to the absolute necessity for a complete revision of the conditions under which deposits may be received from the general public, but up to the present no new legislation has been enacted. Institutions which transact the business of banking are required under the existing law to furnish, in a prescribed form, quarterly statements of their assets and liabilities, and from these statements and the periodical balance-sheets, the information set forth in this chapter has been prepared. Though the provisions of the law are complied with by the banks, the returns furnished are by no means satisfactory, being unsuited to the modern methods of transacting banking business, while they cannot be accepted without question as disclosing the stability or otherwise of the institutions in whose interest they are issued. As a rule, nothing can be elicited beyond what is set forth in the half-yearly or yearly balance-sheets. A want of uniformity is exhibited in respect of the dates of closing the accounts, and the methods of presentation are equally diverse. Important items which should be specifically stated are included with others of minor import, and in some cases current accounts are blended with other accounts instead of being separately shown. The value of the information afforded to the public is illustrated by the fact that it was impossible to obtain from the publications of several institutions suspending payment in 1893 the account of their liabilities, and these particulars were never disclosed.

CAPITAL RESOURCES OF BANKS.

According to the latest information available, the paid-up capital of the thirteen banks doing business in the State is £13,965,931, of which £4,095,060, inclusive of £1,000,000 guaranteed to the Bank of New Zealand by the Government of that Colony, has a preferential claim on the profits of the companies. In the following table will be found a statement of the ordinary and preferential capital of each bank at the date shown, with the amount of the reserve fund of the institution. In the case of some of the companies which were reconstructed, there are reserves which are held in suspense pending realisation of assets, and of these no account has been taken in the table :—

Bank.	Date of Balance-sheet.	Capital paid up.			Reserve Fund.
		Ordinary.	Preferential.	Total.	
		£	£	£	£
Bank of New South Wales	Sept., 1906	2,000,000	....	2,000,000	1,450,000
Commercial Banking Co. of Sydney (Limited)	June, 1906	1,000,000	....	1,000,000	1,100,000
Australian Joint Stock Bank (Limited)	June, 1906	154,570	....	154,570	5,000
City Bank of Sydney	June, 1906	400,000	....	400,000	6,500
Commercial Bank of Australia (Limited)	June, 1906	95,282	2,117,350	2,212,632	211,500
National Bank of Australasia (Limited)	Sept., 1906	1,192,440	305,780	1,498,220	130,000
Queensland National Bank (Limited)	June, 1906	413,245	....	413,245	48,000
Bank of North Queensland (Limited)	June, 1906	100,000	....	100,000	20,000
Bank of New Zealand	Mar., 1906	500,000	1,500,000	2,000,000	81,295
Bank of Australasia	April, 1906	1,600,000	....	1,600,000	1,280,000
Union Bank of Australia (Limited)	Feb., 1906	1,500,000	....	1,500,000	1,085,000
London Bank of Australia (Limited)	Dec., 1905	375,897	171,930	547,827	Nil
English, Scottish, and Australian Bank (Limited)	June, 1906	539,437	....	539,437	136,904

The position of the capital account is shown in the table just given, but some of the banks had made calls on their shareholders which will increase their paid-up capital. The amount of these calls, and the total working capital that will be available when they are met, are as follows :—

Bank.	Capital called and being called up.		
	Capital paid up.	Amount of Calls to be paid on ordinary shares.	Total Working Capital.
	£	£	£
Bank of New South Wales	2,000,000	......	2,000,000
Commercial Banking Co. of Sydney (Limited)	1,000,000	......	1,000,000
Australian Joint Stock Bank (Limited)	154,570	3,257	157,827
City Bank of Sydney	400,000	......	400,000
Commercial Bank of Australia (Limited)	2,212,632	......	2,212,632
National Bank of Australasia (Limited)	1,498,220	......	1,498,220
Queensland National Bank (Limited)	413.245	2,003	415,248
Bank of North Queensland (Limited)	100,000	......	100,000
Bank of New Zealand	2,000,000	......	2,000,000
Bank of Australasia	1,600,000	......	1,600,000
Union Bank of Australia (Limited)	1,500,000	......	1,500,000
London Bank of Australia (Limited)	547,827	565	548,392
English, Scottish, and Australian Bank (Limited)	539,437	......	539,437

The paid-up capital of banks operating in the State has very largely increased during the past thirty years, viz., from £7,930,000 in 1875 to £13,965,931 in 1906, as shown in the following statement, but these figures have no reference to the capital actually employed in the business of the banks, as will be seen from a subsequent table showing the excess of assets over liabilities in New

South Wales. The figures are here inserted only for the purpose of facilitating comparisons which will inevitably arise when the question of the liabilities of banks is being considered. The decrease subsequent to 1896 is accounted for by the writing-off of portion of the capital of some of the banks :—

Year.	Banks.	Paid-up Capital.	Year.	Banks.	Paid-up Capital.
	No.	£		No.	£
1875	10	7,930,000	1897	13	18,357,268
1880	11	9,531,212	1898	13	18,040,449
1885	14	10,512,300	1899	13	18,092,428
1890	17	13,929,326	1900	13	17,732,205
1891	16	13,526,136	1901	13	16,807,069
1892	14	12,384,637	1902	13	16,811,963
1893	13	15,129,749	1903	13	15,776,619
1894	13	16,743,737	1904	13	14,897,299
1895	13	19,306,350	1905	13	13,918,226
1896	13	19,531,430	1906	13	13,965,931

LIABILITIES AND ASSETS OF BANKS.

The liabilities of the banks enumerated, at the dates which have been previously given, aggregated £140,840,357, against which amount assets totalling £161,321,148 were shown. The following table gives the liability of each institution to the public, notes in circulation and deposits being distinguished from other liabilities. In some cases small items which should be classed with "other liabilities" are included with deposits, as they cannot be distinguished in the balance-sheets, and in the case of the Commercial Bank of Australia (Limited), the accounts of the Assets Trust have been excluded :—

Bank.	Notes in Circulation.	Deposits.	Other Liabilities to Public.	Total Liabilities to Public.
	£	£	£	£
Bank of New South Wales	950,908	24,812,021	4,057,842	29,820,771
Commercial Banking Co. of Sydney (Limited)	492,418	13,571,143	1,262,431	15,325,992
Australian Joint Stock Bank (Limited)	62,165	5,309,905	195,915	5,567,985
City Bank of Sydney	75,532	1,086,151	788	1,162,471
Commercial Bank of Australia (Limited)	177,789	4,264,861	914,222	5,356,872
National Bank of Australasia (Limited)	230,944	7,077,547	781,151	8,089,642
Queensland National Bank (Limited)	....	6,969,467	485,684	7,455,151
Bank of North Queensland (Limited)	....	400,218	19,956	420,174
Bank of New Zealand	876,253	12,420,276	1,655,576	14,952,105
Bank of Australasia	543,748	16,964,281	2,924,503	20,432,532
Union Bank of Australia (Limited)	483,481	18,683,209	1,925,227	21,091,867
London Bank of Australia (Limited)	106,144	4,193,691	667,663	4,967,498
English, Scottish, and Australian Bank (Limited)	41,008	5,675,427	471,862	6,188,297

The assets of each bank are as follow :—

Bank.	Coin and Bullion and Cash Balances.	Advances.	Other Assets.	Total Assets.
	£	£	£	£
Bank of New South Wales	5,276,929	19,705,604	8,449,971	33,432,504
Commercial Banking Co. of Sydney (Limited)	3,059,710	8,745,658	5,708,502	17,513,870
Australian Joint Stock Bank (Limited)	708,380	4,276,161	753,525	5,738,066
City Bank of Sydney	330,111	1,052,044	194,321	1,576,476
Commercial Bank of Australia (Limited)	1,017,059	4,411,937	2,402,502	7,831,498
National Bank of Australasia (Limited)	1,917,538	5,885,731	1,965,724	9,768,993
Queensland National Bank (Limited)	983,311	5,469,542	1,475,543	7,928,396
Bank of North Queensland (Limited)	96,356	363,797	83,566	543,719
Bank of New Zealand	2,379,619	8,028,107	6,900,003	17,307,729
Bank of Australasia	3,489,964	15,484,095	4,451,823	23,425,882
Union Bank of Australia (Limited)	3,851,921	12,351,530	7,577,570	23,781,021
London Bank of Australia (Limited)	901,131	3,522,297	1,126,653	5,550,081
English, Scottish, and Australian Bank (Limited)	846,100	4,682,819	1,398,994	6,927,913

It will be noted that both the assets and liabilities represent the total of the various banks wherever situated, and not merely the New South Wales assets and liabilities, which are set forth in a subsequent paragraph. The difference between the assets and liabilities shown in the table amounts to £20,480,791, and practically corresponds with the paid-up capital and reserves (£19,520,130), referred to on a previous page, the difference in the two amounts representing the undivided profits.

METALLIC RESERVES OF BANKS.

The proportion of metallic reserves which banking institutions must habitually keep in stock is not fixed by any enactment. Compared with the total liabilities, and with deposits at call and note circulation, the quantity of coin and bullion has varied very considerably from year to year, as the following statement shows; but prior to 1892 the proportion of gold to circulation and deposits at call rarely reached 50 per cent., and the proportion to total liabilities varied between 13 and 26 per cent. The approach of the crisis of 1893 was foreseen, or at all events most institutions strengthened their reserves in anticipation of the strain, while since the crisis all the banks have accumulated gold, so that their stock of coin and bullion in the June quarter of 1906 averaged £8,356,772—that is to say, nearly six times the note circulation, and one-half of the total liabilities at call. There can be no doubt that the gold accumulations of the banks in the years 1894, 1895, and 1896 were greatly in excess of ordinary business requirements, and were maintained solely as a precaution against a revival of the unsettled conditions which marked the year 1893, but during the ten years preceding 1906 a considerable reduction in the stocks of gold took place and large shipments of coin have been made to Europe and the United States:—

Year.	Coin.	Bullion.	Total.	Proportion of Metallic Reserves—	
				To Total Liabilities.	To Deposits at Call and Note Circulation.
	£	£	£	per cent.	per cent.
1860	1,578,424	90,052	1,668,476	25·7	*
1865	1,328,504	125,554	1,454,058	20·9	*
1870	1,291,177	86,744	1,377,921	19·1	*
1875	2,317,600	104,947	2,422,547	16·1	40·4
1880	3,488,554	75,008	3,563,562	18·3	49·5
1885	4,027,055	76,260	4,103,315	13·8	39·2
1890	5,619,111	87,659	5,706,770	15·3	49·1
1891	4,717,659	79,768	4,797,427	12·8	44·2
1892	5,217,371	95,894	5,313,265	14·4	57·4
1893	5,877,891	95,386	5,973,277	17·5	57·7
1894	7,330,005	100,525	7,430,530	23·8	69·8
1895	7,364,659	151,619	7,516,278	23·5	65·7
1896	6,760,851	187,845	6,948,696	22·2	58·2
1897	5,766,554	175,037	5,941,591	19·2	50·4
1898	5,564,870	200,310	5,765,180	18·4	47·7
1899	5,865,622	217,136	6,082,758	18·4	46·4
1900	5,933,076	193,050	6,126,126	18·0	44·8
1901	5,814,180	171,545	5,985,725	17·1	41·7
1902	6,329,551	223,172	6,552,723	18·8	46·7
1903	5,824,539	226,307	6,050,846	17·7	43·3
1904	6,175,911	276,446	6,452,357	18·5	46·1
1905	8,624,083	199,177	8,823,260	22·7	54·2
1906	8,193,524	163,248	8,356,772	20·4	48·5

* Amount of deposits at call unobtainable.

The metallic reserves held by the banks as against their total New South Wales liabilities, and also against their liabilities at call, viz., deposits at call and note circulation at 30th June, 1906, are indicated in the following statement. The table, however, cannot be taken as complete, as some banks receiving deposits in England and elsewhere do not include such liabilities in their returns :—

Bank.	Coin and Bullion.	Total Liabilities.	Liabilities at Call.	Proportion of Coin and Bullion— To Total Liabilities.	Proportion of Coin and Bullion— To Liabilities at Call.
	£	£	£	per cent.	per cent.
Bank of New South Wales	2,503,716	14,869,722	5,970,971	16·84	41·93
Commercial Banking Co. of Sydney (Limited)	2,940,014	12,583,547	5,553,724	23·36	52·94
Australian Joint Stock Bank (Limited)	288,094	2,680,983	753,044	10·74	38·26
City Bank of Sydney	120,080	1,113,871	607,747	10·78	19·76
Commercial Bank of Australia (Limited)	109,200	223,276	165,336	48·91	66·04
National Bank of Australasia (Limited)	176,022	294,682	123,264	59·73	142·80
Queensland National Bank (Limited)	136,235	329,498	62,591	41·35	217·66
Bank of North Queensland (Limited)	28,525	120,687	36,818	23·63	77·47
Bank of New Zealand	169,769	89,641	56,825	189·39	298·76
Bank of Australasia	673,552	3,593,503	1,779,903	18·74	37·84
Union Bank of Australia (Limited)	750,064	2,846,097	1,253,777	26·35	59·82
London Bank of Australia (Limited)	234,025	846,615	381,926	27·64	61·27
English, Scottish, and Australian Bank (Limited)	227,476	1,426,527	489,599	15·94	46·46

LOCAL BUSINESS OF BANKS.

There are thirteen banks of issue operating in the State, four of which have their head offices in Sydney, two in Melbourne, two in Queensland, one in New Zealand, and four in London. Of the four local banks, three have branches outside the State, and the fourth confines its operations to New South Wales. Two of the local banks—the Bank of New South Wales and the City Bank of Sydney—carry on their business under the provisions of special Acts of Incorporation, and the liability attached to the shareholders is limited by the Acts to the amount subscribed for and an additional sum equal thereto; the Commercial Banking Company of Sydney (Limited) and the Australian Joint Stock Bank (Limited) are registered as limited companies.

The banks are required by Act No. 9 of 1898, which repealed the Act of Council 4 Victoria No. 13, passed in the year 1840, to make quarterly statements of their business in a prescribed form; but these statements are not all made on the same lines, and it is necessary, therefore, to make certain adjustments in order to place the figures on a comparative basis. The alterations consist in the exclusion from the assets of two of the banks of the balances due by branches and agencies outside New South Wales to the head office in Sydney. The following table shows the assets and liabilities and the surplus assets of the banks, at intervals from 1860 onwards; the surplus assets may be taken as representing the amount provided by the banks from their own resources. The figures in this and subsequent tables refer to the quarter ended 31st December, with the exception of those for 1906, which are for the quarter ended 30th June :—

Year.	Assets within the State.	Liabilities within the State.	Surplus assets (Capital and Reserves used in local business).
	£	£	£
1860	8,053,463	6,480,642	1,572,821
1865	9,193,540	6,962,315	2,231,225
1870	9,863,071	7,198,680	2,664,391
1875	15,545.507	15,056,485	489,022
1880	21,658,317	19,485,862	2,172,455
1885	37.737,869	29,687,296	8,050.573
1890	52.436,977	37,248,937	15,188,040
1891	53,596,259	37,589,764	16,006,495
1892	53,317,892	37,171,379	16,146,513
1893	48.794,036	34,102,172	14,691,864
1894	47,261,405	31,649,255	15,612,150
1895	45,622,329	32,037,052	13,585,277
1896	44.527.828	31,254,776	13,273,052
1897	43,980,722	31,026,523	12,954,199
1898	42,638,224	31,311,293	11,326,931
1899	42,194,661	33.055,059	9,139,602
1900	43,036,427	33.969,731	9,066,696
1901	43.437,559	35,077,832	8,359,727
1902	43,630,491	34,930,428	8,700,063
1903	43.165,576	34,250,541	8,915,035
1904	41,606,948	34,901,232	6,705,716
1905	43.694.137	38,860,062	4,834,075
1906	42,940,571	41,018,649	1,921,922

If the table just given be compared with the previous one, showing the paid-up capital of the various banks doing business in the State, it will be seen that the tendency has been for the banks to increase the proportion of their own capital employed in the State.

In New South Wales the assets of the banks touched their highest point in 1891 and 1892, and in the latter year the capital employed by them in excess of their local liabilities was £16,146,513, this excess included the paid-up capital and reserves of the banks, as well as the British and other deposits used in the State. From the sum just named, the excess of assets fell in 1901 to £8,359,727, and in June, 1906, to £1,921,922.

There was some writing-down of capital after the bank crisis, but the difference between the highest and lowest years (1892 and 1906) shown in the foregoing table, viz., £14,224,591, represents for the most part the withdrawal of British and other deposits obtained outside of New South Wales. In the year 1901 the total deposits obtained by the banks in respect of their New South Wales business were probably a little over £40,000,000, so that the British and other external deposits then held but subsequently withdrawn represented not far short of 20 per cent. of the total. With the year 1901 the withdrawals of banking capital ceased, and each subsequent year shows a slight recovery. The total capital withdrawn covered a period of nine years; the average withdrawal therefore was at the rate of about £800,000 a year, a sum, taken in connection with the period over which it continued, sufficiently large to cause considerable dislocation of business.

It will be apparent from a consideration of the table on a subsequent page that the deposits in banks have vastly increased in volume, while there has been a corresponding diminution in the rate of advances. The figures tend to prove that capital is being steadily withdrawn from private investments. Had such increase in deposits been unattended by the decreased rate in advances there would have been room for the supposition that the State's internal resources were fast waxing in importance. Ten years ago, however, the deposits in the banks of the State reached a total of nearly £30,000,000, while the advances were over £35,500,000. At June, 1906, however, the deposits were £39,099,615, while the advances were only £32,056,712. It appears from the records that prior to the financial crisis of 1893 the banks were accustomed to receive large deposits from the United Kingdom. At present they receive very little from that source, while conversely there are held on deposit in London considerable sums of money of Australian origin. That these amounts form a source of profit to the institutions goes without saying, the regrettable feature in the circumstance being that they could not be used for investments locally. Any expansion of banking in a country depends on the plenitude of sources of investment, and where these are restricted, the banks would have no other recourse than to lower the rates of interest with a view to discouraging deposits.

The banking returns do not admit of any useful deductions being made from them, as the classification, both of assets and liabilities, required by the schedule to the Act is obsolete; thus under the term, "deposits not bearing interest," most of the banks are accustomed to return interest accrued and all debts due by them other than deposits at interest, notes, and bills, the result being that in this respect the returns are misleading. It unfortunately happens, moreover, that there are no means of correcting the figures. That the over-statement is considerable will appear from the fact that the census returns of 1891 showed deposits not bearing interest as £7,828,906, as compared with a total in the quarterly statements of £9,363,727.

The assets, which naturally form the most interesting feature of a bank's returns, show coin and bullion separately, but 93 per cent. of the other assets are marshalled together under the term "notes and bills discounted, and all other debts due to the bank," and the lines on which business is conducted are therefore entirely hidden from sight. The following statement of liabilities for the past ten and a half years refers to local business only:—

AVERAGE LIABILITIES WITHIN NEW SOUTH WALES.
(Exclusive of Liabilities to Shareholders.)

Year.	Number of Banks.	Notes in Circulation.	Bills in Circulation.	Deposits.			Balances due to other Banks.	Total Liabilities.
				Not bearing Interest.	Bearing Interest.	Total.		
		£	£	£	£	£	£	£
1896	13	1,237,971	111,889	10,707,611	19,128,305	29,835,916	69,000	31,254,776
1897	13	1,227,964	112,113	10,582,621	19,024,114	29,606,735	79,711	31,026,523
1898	13	1,278,940	125,414	10,812,215	19,040,496	29,852,711	54,228	31,311,293
1899	13	1,340,557	202,468	11,779,918	19,648,107	31,428,025	84,009	33,055,059
1900	13	1,447,641	209,905	12,224,510	20,009,081	32,233,591	78,594	33,969,731
1901	13	1,499,937	218,943	12,841,599	20,416,857	33,258,456	100,496	35,077,832
1902	13	1,454,415	208,521	12,587,097	20,472,785	33,059,882	207,610	34,930,428
1903	13	1,378,642	228,059	12,591,637	19,986,224	32,577,861	65,979	34,250,541
1904	13	1,345,934	196,995	12,642,715	20,638,560	33,281,275	77,028	34,901,232
1905	13	1,430,335	218,555	14,859,427	22,211,627	37,071,054	140,118	38,860,062
1906	13	1,461,640	244,059	15,773,885	23,325,730	39,099,615	213,335	41,018,649

The assets for the same period were as given in the following table:—

AVERAGE ASSETS WITHIN NEW SOUTH WALES.

Year.	Number of Banks.	Coin.	Bullion.	Landed Property.	Notes and Bills discounted, and all other debts due to the Banks.	Notes and Bills of other Banks (and Queensland Treasury Notes).	Balances due from other Banks.	Total Assets.
		£	£	£	£	£	£	£
1896	13	6,760,851	187,845	1,914,483	35,116,696	223,487	324,466	44,527,828
1897	13	5,766,554	175,037	1,816,691	35,697,494	227,427	297,519	43,980,722
1898	13	5,564,870	200,310	1,812,804	34,403,700	256,997	399,543	42,638,224
1899	13	5,865,622	217,136	1,819,359	33,688,862	287,030	316,652	42,194,661
1900	13	5,933,076	193,050	1,674,099	34,385,388	246,998	403,816	43,036,427
1901	13	5,814,180	171,545	1,744,664	35,068,787	259,202	379,181	43,437,559
1902	13	6,329,551	223,172	1,789,902	34,654,744	287,025	346,097	43,630,491
1903	13	5,824,539	226,307	1,804,956	34,686,452	304,418	318,904	43,165,576
1904	13	6,175,911	276,446	1,808,266	32,798,708	283,002	264,615	41,606,948
1905	13	8,624,083	199,177	1,799,231	32,447,659	326,750	297,237	43,694,137
1906	13	8,193,524	163,248	1,833,991	32,056,712	297,107	395,989	42,940,571

ADVANCES BY BANKS.

Under the head of advances are included bills and promissory notes discounted, cash credits, and miscellaneous debts. The bulk of advances made are secured by the mortgage of real estate or by the depositing of deeds over which the lending institution acquires a lien; the discounting of trade bills does not amount to more than about 15 per cent. of the total cash credits and overdrafts. The banking returns are in such a defective form that an account of the nature of advances made, and the class of security advanced against, cannot be given. The most interesting summary that can be made is that which the following table supplies:—

Year.	Advances.	Ratio of Advances to Deposits.	Amount of Advances per Inhabitant.		
	£	per cent.	£	s.	d.
1860	5,780,700	111·9	16	17	6
1865	7,100,861	121·8	17	15	0
1870	7,814,116	127·9	15	18	11
1875	12,483,713	91·4	21	17	1
1880	17,210,205	96·2	23	12	4
1885	31,344,909	117·4	33	16	1
1890	43,009,559	121·3	39	0	6
1891	45,068,914	126·4	38	15	7
1892	44,135,729	124·1	37	0	8
1893	40,024,354	124·5	32	19	1
1894	37,378,947	125·4	30	3	3
1895	35,707,153	116·6	28	5	9
1896	35,116,696	117·7	27	9	2
1897	35,697,494	120·6	27	8	5
1898	34,403,700	115·2	26	0	0
1899	33,688,862	101·9	25	1	4
1900	34,385,388	101·2	25	4	0
1901	35,068,787	105·4	25	8	5
1902	34,654,744	104·8	24	12	4
1903	34,686,452	106·5	24	4	7
1904	32,798,708	98·6	22	8	10
1905	32,447,659	87·5	21	18	11
1906	32,056,712	82·0	21	8	7

The useful purpose which the banking system serves may be readily realised from the foregoing statement. The period extending from 1875 right on to 1885 was, on the whole, one of trade prosperity, and throughout those years the ratio of advances to deposits ranged between 91 and 117 per cent. Since 1885 New South Wales, in common with the other States, has suffered more or less from depression, and the ratio of advances to deposits has fluctuated between 81·99 and 126·4 per cent.

DEPOSITS IN BANKS.

The total amount of money deposited with the thirteen banks operating in New South Wales in the middle of 1906 was approximately £121,428,197, and of this sum £39,099,615 was received locally. The excess of the total over local deposits was employed in the various countries to which the banks' business extended, some of course being used in New South Wales; but, from the very nature of the transactions of the banks, it is not possible to do more than make a surmise as to the amount so used. Dealing only with local deposits, the following statement shows the average amount of money deposited at various periods commencing with 1860; the distinction between interest-bearing deposits and those at call was first made in 1875:—

Year.	Deposits bearing Interest.	Deposits not bearing Interest.	Total Deposits.
	£	£	£
1860	....	....	5,164,011
1865	....	....	5,827,098
1870	....	....	6,107,999
1875	8,775,882	4,875,010	13,650,892
1880	11,948,383	5,934,641	17,883,024
1885	18,038,497	8,670,889	26,709,386
1890	25,395,600	10,064,518	35,460,118
1891	26,470,817	9,188,873	35,659,690
1892	26,357,083	9,207,109	35,564,192
1893	23,584,119	8,557,840	32,141,959
1894	20,380,032	9,412,761	29,792,793
1895	20,406,822	10,222,437	30,629,259
1896	19,128,305	10,707,611	29,835,916
1897	19,024,114	10,582,621	29,606,735
1898	19,040,496	10,812,215	29,852,711
1899	19,648,107	11,779,918	31,428,025
1900	20,009,081	12,224,510	32,233,591
1901	20,416,857	12,841,599	33,258,456
1902	20,472,785	12,587,097	33,059,882
1903	19,986,224	12,591,637	32,577,861
1904	20,638,560	12,642,715	33,281,275
1905	22,211.627	14,859,427	37,071,054
1906	23,325,730	15,773,885	39,099,615

The deposits reached their highest level in June, 1906, when there was entrusted to the banks a total of £39.099,615. In the year 1891 the deposits in banks amounted to £35,659,690, but in the years immediately subsequent fully five millions were withdrawn, the reduction being entirely in interest-bearing deposits, which were very largely withdrawn in 1893 at the time of the bank crisis, and during the succeeding year. The withdrawals in 1894 were probably due to a combination of circumstances. Previous stoppages of payments had made many timorous depositors withdraw their fixed deposits on maturity, and place the money in the savings banks, as is evidenced by the fact that the New South Wales and Post Office Savings Banks increased their deposits by over one million and a half from 1892 to 1894; while the capital called up by the banks themselves absorbed a considerable sum which would otherwise have remained on deposit. To these two causes which tended to decrease the money on deposit with the banks may be added a third—the withdrawal of money for hoarding. That this last must have been considerable may be argued from the fact that the stock of gold in private hands was increased during 1893 by £1,003,473, and in 1894 by £321,793, while the gold needed for circulation probably decreased during those years. Since 1894 there has been a tendency to withdraw money from fixed deposit and to place it at current account. The current accounts have increased by over six million since 1894, while the total deposits have increased to over £39,000,000.

The interest offering for fixed deposits has now fallen to from 3 to 3½ per cent. for sums deposited for twelve months; for six months' deposits the interest allowed is at the rate of 2 per cent. The practice of allowing interest on money fixed for terms of less than six months was discontinued in May, 1894. The rates quoted are much the lowest that have been offered since banks were first opened for business, and money equal to their requirements is freely offered. The following is a statement of the average rates for twelve months' deposits from 1860 onwards. The figures of the last ten years do not include interest payable on deferred deposits by reconstructed banks:—

Year.	Bank Interest on Deposits for twelve months.	Year.	Bank Interest on Deposits for twelve months.
	per cent.		per cent.
1860	5	1895	3½
1865	6	1896	3
1870	5	1897	3
1875	5¼	1898	3
1880	5	1899	3
1885	5	1900	3
1890	4½	1901	3
1891	4¾	1902	3
1892	5	1903	3 to 3½
1893	4½	1904	3½
1894	4¼	1905	3 to 3½

Under normal conditions the annual rate of interest paid on fixed deposits is uniform for all banks; but some of the institutions which have undergone reconstruction have not been in a position to reduce the rates on a large proportion of the deposits, so that they are paying the ordinary market rate of 3 to 3½ per cent. on deposits received since reconstruction, while rates varying from 2 to 5 per cent. are being paid on the extended deposits. The reconstructed banks have power to release their extended deposits at any time on giving the necessary notice of their intention to do so, and the deposits when renewed are being accepted at the ordinary or reduced rate.

The liability to depositors of the reconstructed banks at the dates of suspension was £58,914,585; but up to the end of March, 1906, £43,322,992 of the deposits had been liquidated, £2,595,060 turned into preferential share capital, and £7,182,575 into inscribed or perpetual stocks or debentures, so that there were then deposits to the extent of £5,813,958 awaiting release.

The complete statement of the deposit accounts of the thirteen banks operating at the end of March, 1906, was as shown below :—

Banks.	Deposits.					
	Capitalised (Preferential Capital).	Invested in Inscribed Debenture and Perpetual Stocks.	Extended deposits.	Fixed at ordinary rates.	At current account.	Total
	£	£	£	£	£	£
Bank of New South Wales	......	......	......	15,410,252	9,942,449	25,352,701
Commercial Banking Co. of Sydney (Limited)	......	......	......	7,575,886	5,897,770	13,473,656
Australian Joint Stock Bank (Limited)	......	791,805	3,261,676	281,480	929,973	5,264,934
City Bank of Sydney	......	......	......	507,056	508,374	1,015,430
Commercial Bank of Australia (Limited)	2,117,350	......	2,727	1,396,330	2,433,072	5,949,479
National Bank of Australasia (Limited)	305,780	......	......	4,012,427	2,849,759	7,167,966
Queensland National Bank (Limited)	......	3,116,621	1,291,465	862,715	1,498,914	6,769,715
Bank of North Queensland (Limited)	......	......	......	185,414	154,110	339,524
Bank of New Zealand	......	......	......	4,394,730	8,025,545	12,420,275
Bank of Australasia	......	......	......	9,326,100	7,638,180	16,964,280
Union Bank of Australia (Limited)	......	600,000	......	9,958,145	8,130,817	18,688,962
London Bank of Australia (Limited)	171,930	......	1,258,090	1,774,477	1,256,849	4,461,346
English, Scottish, and Australian Bank (Limited)	......	2,674,149	......	1,408,029	1,501,801	5,583,979
Total	2,595,060	7,182,575	5,813,958	57,093,041	50,767,613	123,452,247

The amount fixed at ordinary rates in the Commercial Bank of Australia (Limited) is exclusive of the deposits in the "Special Assets Trust Company (Limited)"; while the inscribed or perpetual stocks of the English, Scottish, and Australian Bank, Limited, include debenture stocks. The Bank of New Zealand has also 4 per cent. guaranteed stock to the amount of £1,000,000, and £500,000 preference shares issued to the Government, but not included in the foregoing statement.

Some of the reconstructed banks accept their own deposit receipts at face value in liquidation of debts owing to them, and in payment of calls where debtors are unable to pay cash. Holders of negotiable deposits, however, wishing to sell in open market are obliged to accept prices below the face value, as will be seen in the subjoined table, which gives the rates offered for deposits of six banks. The Bank of North Queensland, the Commercial Banking Company of Sydney, and the National Bank of Australasia have released the balance of their locked-up deposits, and since then some of the other reconstructed banks have prepaid portion of their deposits. The prices here quoted are those ruling in Sydney at the beginning of December, 1906 :—

Bank.	Buying Price.
	£ s. d.
Australian Joint Stock Bank (Limited)—	
Inscribed	0 13 3
A Deposits	0 19 7½
B Deposits	0 14 4½
Commercial Bank of Australia (Limited)—	
Deposits Trust	0 14 9
English, Scottish, and Australian Bank (Limited)—	
Debenture Stock	0 19 3
Inscribed—	
Perpetual Preferred	0 13 6
Redeemable Deferred	0 19 4
Queensland National Bank (Limited) Inscribed	0 16 7½

The overdraft and discount rates remained almost stationary until 1895, but during the last eight years a decrease has taken place, especially in the discount rates, while the decline since 1889 is almost equal to the fall in the deposit rates. Under ordinary circumstances discount and overdraft rates should move down with the interest rates paid to depositors; and it is therefore evident, from a consideration of the profit and loss accounts of the various institutions, that the business of the banks has now attained a healthier condition than has existed since the crisis.

The rates for overdrafts and discounts for the ten years ended 1905 were as follow :—

Year.	Overdraft Rates.	Discount Rates.	
		Bills at 3 months.	Bills over 3 months.
	per cent.	per cent.	per cent.
1896	6 to 7½	6 to 6½	7 to 8
1897	6 ,, 7	5 ,, 5½	5½ ,, 6½
1898	6 ,, 7	5 ,, 5½	5½ ,, 6½
1899	6 ,, 7	5 ,, 5½	5½ ,, 6½
1900	6 ,, 7	5 ,, 5½	5½ ,, 6½
1901	6 ,, 7	5 ,, 5½	5½ ,, 6½
1902	6 ,, 7	5 ,, 5½	5½ ,, 6½
1903	6 ,, 7	5 ,, 6	5½ ,, 6½
1904	6 ,, 7½	5½ ,, 6	6 ,, 6½
1905	6 ,, 7½	5½ ,, 6	6 ,, 6½

The bank exchange rate on London, at sixty days' sight, averages about 1 per cent., but is subject to a good deal of fluctuation. During the height of the bank panic in May, 1893, it was 3½ per cent., the banks at that date requiring all their available assets for other purposes. The rates for the ten years ended 1905 were :—

Year.	Exchange rate on London at 60 days' sight.	
	Buying.	Selling.
	per cent.	per cent.
1896	99½ to 99¾	100½ to 100¾
1897	99½ ,, 100⅛	100½ ,, 100⅞
1898	99⅝ ,, 100 7/40	100½ ,, 100¾
1899	98¾ ,, 99⅞	100¼ ,, 100¾
1900	98¾ ,, 99½	100¼ ,, 100⅝
1901	99⅛ ,, 99½	100⅜ ,, 100¾
1902	99⅛ ,, 99⅜	100⅜ ,, 100⅝
1903	99 ,, 99½	100¼ ,, 100¾
1904	99 ,, 99½	100⅛ ,, 100½
1905	99¼ ,, 99½	100⅛ ,, 100½

RESULTS OF WORKING OF BANKS.

The results of the working of each bank for the latest period for which information is available, are given in the following table. With the exception of the Bank of New Zealand, the English, Scottish, and Australian Bank

(Limited), and the London Bank of Australia (Limited), for which the figures refer to twelve months' operations, the amounts given cover a period of six months. The dates of the balance sheets are shown on page 531 :—

Bank.	Class of Shares.	Amount brought forward.	Net Profits less rebate on bills current.	Dividend Paid.		Amount transferred to Reserve Fund, Contingency Accounts, Reduction of Premises Account, &c.	Amount carried forward.
				Rate per cent. per annum.	Amount.		
		£	£		£	£	£
Bank of New South Wales	Ordinary ..	22,618	130,115	10	100,000	25,000	27,733
Commercial Banking Company of Sydney (Limited).	Ordinary ..	21,856	66,022	10	50,000	15,000	22,878
Australian Joint Stock Bank (Limited)	Ordinary ..	3,988	1,523	..	....	....	5,511
City Bank of Sydney	Ordinary ..	1,439	6,066	2¼	5,000	1,000	1,505
Commercial Bank of Australia (Ltd.)	Preferential Ordinary ..	14,439	69,776	3 ..	31,760	38,721	13,734
National Bank of Australasia (Limited)	Preferential Ordinary ..	6,149	44,982	5 4½	7,644 26,880	10,000	6,657
Queensland National Bank (Limited) ..	Ordinary ..	....	23,421	..	9,000	14,421	....
Bank of North Queensland (Limited) ..	Ordinary ..	1,084	2,461	2½	1,330	....	2,215
Bank of New Zealand	Preferential Ordinary ..	Nil.	290,330	5 5	50,000	66,001	174,329
Bank of Australasia	Ordinary ..	17,555	137,795	12	96,000	42,000	17,350
Union Bank of Australia (Limited)	Ordinary ..	28,276	104,878	10	75,000	29,000	29,154
London Bank of Australia (Limited)..	Preferential Ordinary ..	11,562	23,194	5¼ 2¼	18,649	....	16,107
English, Scottish, and Australian Bank (Limited).	Ordinary ..	16,612	61,663	4½	36,271	24,092	17,912

The total net profit for the Bank of New Zealand was £330,330, and the interest on guaranteed stock amounted to £40,000, leaving £290,330 for distribution. Of this sum £16,001 was written off the various estate and property accounts; £50,000 was paid to the Assets Realisation Board; £50,000 for dividend on ordinary shares at 5 per cent.; leaving a balance of £174,329, which must be paid to the Assets Realisation Board in accordance with the Act of 1903, which governs the operations of the bank. The dividend paid by the Queensland National Bank represents £9,000 paid to private depositors' repayment fund. The total net profit was £23,421, of which £11,421 was allotted to the contingency account. The net profit shown for the London Bank of Australia, and the English, Scottish, and Australian Bank (Limited), is exclusive of the interest on transferable fixed deposits, debenture stocks, &c.; while the earnings of the Commercial Bank of Australia (Limited), include £5,000 transferred to the Special Assets Trust Reserve Account, £28,721 to the Special Assets Trust Company, and £5,000 in reduction of premises. The net profit shown for the Union Bank of Australia (Limited) is inclusive of £10,000 for reduction of premises, and £4,000 in aid of the guarantee and provident funds. The dividend tax payable by the Bank of North Queensland, has been included in the amount of dividend shown in the table. The amount shown as carried to reserve by the Bank of Australasia includes £12,000, for reduction of cost of premises. In the case of the English, Scottish, and Australian Bank (Limited), the amount of dividend shown includes a further payment, being an extra 1½ per cent. interest to the holders of deferred inscribed deposit stock, and the amount shown as carried to reserve includes £8,092 for the purchase and cancellation of deferred inscribed deposit stock, in accordance with the articles of association, and £1,000 contribution to Officers' Guarantee and Provident Fund.

WORKING EXPENSES AND PROFITS.

The published balance-sheets of banks as a rule give very meagre information of the results of their working, and with one exception it is impossible to ascertain the amount of the gross profits. In the matter of management expenses equal reticence is observed, not one bank whose head office is in the State giving this information to its shareholders. The net profits are, therefore, the only data on which a comparative statement can be based, and the ratio of such to paid-up capital and reserves, and to the banks' trading and total assets, will be found in the subjoined statement:—

Bank.	Net Profits for twelve months, 1905-1906.	Ratio of Net Profits to— Paid-up Capital and Reserves.	Ratio of Net Profits to— Total Trading Assets.	Ratio of Net Profits to— Total Assets of all kinds.
	£	per cent.	per cent.	per cent.
Bank of New South Wales	259,500	7·51	0·79	0·78
Commercial Banking Co. of Sydney (Limited)	131,285	6·14	0·77	0·75
Australian Joint Stock Bank (Limited)	2,947	1·78	0·05	0·05
City Bank of Sydney	12,183	2·97	0·86	0·77
Commercial Bank of Australia (Limited)	141,263	5·78	1·91	1·80
National Bank of Australasia (Limited)	86,126	5·24	0·94	0·88
Queensland National Bank (Limited)	45,729	9·85	0·60	0·58
Bank of North Queensland (Limited)	4,771	3·90	0·93	0·88
Bank of New Zealand	290,330	12·69	1·71	1·68
Bank of Australasia	275,246	9·50	1·19	1·18
Union Bank of Australia (Limited)	209,646	8·02	0·91	0·88
London Bank of Australia (Limited)	23,194	4·11	0·52	0·43
English, Scottish, and Australian Bank (Limited)	61,663	8·88	0·94	0·89

The results shown in the above table must be regarded as very satisfactory when compared with the figures for the preceding years. All the banks have succeeded in carrying on operations at a profit, and although in some cases the amount is small, it should be remembered that the severe drought through which the State has passed, and from the effects of which it is only now recovering, precluded any large additions to the profits. Moreover, four of the institutions showed an absolute loss on the transactions of the year 1896–7, so that the recovery is a still further evidence of the returning prosperity of the people.

Intimately connected with the question of profits is that of working expenses, and it must be confessed that the cost of working banking institutions in Australasia is undoubtedly large. This is partly due to the wide and sparsely populated area over which operations are carried on, and partly to the class of business in which banks are engaged. The following is a statement of the cost of management of the several banks enumerated:—

Bank.	Expenses of Management for twelve months, 1905–6. Total.	Expenses of Management for twelve months, 1905–6. Ratio to bank's resources (Paid-up Capital, Reserves, Deposits, and Note Circulation).
	£	per cent.
Bank of New South Wales	*	....
Commercial Banking Company of Sydney (Limited)	*	....
Australian Joint Stock Bank (Limited)	81,927	1·48
City Bank of Sydney	*	....
Commercial Bank of Australia (Limited)	113,306	1·65
National Bank of Australasia (Limited)	128,243	1·43
Queensland National Bank (Limited)	78,530	1·06
Bank of North Queensland (Limited)	12,978	2·48
Bank of New Zealand	198,688	1·28
Bank of Australasia	308,588	1·51
Union Bank of Australia (Limited)	268,053	1·23
London Bank of Australia (Limited)	73,626	1·51
English, Scottish, and Australian Bank (Limited)	97,380	1 52

* Information not available.

It will be observed that the expenses of working three of the four local banks are not shown in the statement just given. These banks do not disclose even to their shareholders the details of their business, so that the reference to the cost of banking business is seriously incomplete; but taking such banks as are enumerated as a guide to the whole of the institutions, the total expenses of management of the thirteen banks which have offices in the State may be set down for the year 1905-6 at £2,012,163.

The following statement may be taken as approximately correct :—

Total trading assets	£158,238,864
Capital and reserves	19,520,130
Gross earnings, less reserve for bad and doubtful debts, and rebate on bills current	6,274,102
Gross expenditure, including interest	4,730,269
Net earnings	1,543,833

Compared with the total assets, the net earnings represent 0·95 per cent., and compared with the banks' own resources—*i.e.*, capital and reserved profits—7·73 per cent. The gross expenditure set down above may be divided into the expenses of management, £2,012,163, and interest, £2,718,106; these together amount to 75·39 per cent. of the gross earnings, the management expenses being 32·07 per cent., and the interest 43·32 per cent. It would, therefore, appear that for every £1 of net earnings, £1 6s. 1d. are spent in management expenses, and £1 15s. 3d. in interest. The cost of working banking institutions in Australia is undoubtedly very large; but this class of business is everywhere expensive, and an analysis of the balance sheets of twenty-four British joint stock banks show that the expenses of management amount to nearly £1 3s. 2d. for every £1 of net earnings.

In order that a comparison may be made with the results obtained before the financial crisis, the following figures for the year 1892 are given :—

Total trading assets	£155,582,833
Capital and reserves	19,084,148
Gross earnings, less reserve for bad and doubtful debts	7,638,400
Gross expenditure, including interest	6,068,600
Net earnings	1,569,800

The net earnings in 1892 equalled 1·01 per cent. of the total assets, and 8·23 per cent. of capital and reserves.

The following table affords a comparison of the working of New South Wales banks with the joint stock banks in the United Kingdom that publish profit and loss accounts. The figures relate to the year 1905 :—

Banks.	No. of Banks.	Capital and Reserves.			Total Earnings.	Deposits.	
		Paid-up Capital.	Reserves and Undivided Profits.	Total.		Total.	Percentage of Earnings to Deposits.
		£	£	£	£	£	
English	48	54,096,441	35,529,052	89,625,493	7,957,491	552,123,637	1·44
Scotch	8	7,902,000	8,040,296	15,942,296	1,399,868	87,429,460	1·60
Irish	5	5,509,231	2,692,722	8,201,953	653,312	36,527,849	1·78
N. S. Wales	13	13,965,931	5,889,284	19,855,215	1,543,833	121,428,197	1·27

Most of the banks have contrived to reduce their working expenses during the last few years; this has been accomplished mainly by closing unprofitable branches.

The number of banks and branches open throughout New South Wales in 1906 was 467, or 8 per cent. less than in 1892. This gives a proportion of one bank or branch to every 3,200 persons. In England the proportion is one bank to 7,600 persons; in Scotland, one to every 4,100; and in Ireland, one to every 7,100.

DIVIDENDS OF BANKS.

No feature of banking business was, until a few years ago, so conspicuous as the large dividends. The vast changes brought about by the bank crisis of 1893 materially interfered with the earning powers of banks, and of the thirteen operating in the State three were not able to declare a dividend on their ordinary share capital during the year 1905–6. A comparison between 1892-3—that is, the year before the crisis—and the year 1905-6 is afforded by the following table, which refers only to dividends paid on ordinary share capital:—

Bank.	Dividend per cent.	
	1892–3.	1905–6.
Bank of New South Wales	17½	10
Commercial Banking Company of Sydney (Limited)	25	10
Australian Joint Stock Bank (Limited)	15	Nil.
City Bank of Sydney	10	2½
Commercial Bank of Australia (Limited)	12½	Nil.
National Bank of Australasia (Limited)	12½	4½
Queensland National Bank (Limited)	10	Nil.
Bank of North Queensland (Limited)	5	2½
Bank of New Zealand	5	5
Bank of Australasia	12½	12
Union Bank of Australia (Limited)	12	10
London Bank of Australia (Limited)	8	2½
English, Scottish, and Australian Bank (Limited)	4	4½

BANKS' EXCHANGE SETTLEMENT.

The Banks' Exchange Settlement Office, which was established in Sydney on the 18th January, 1894, is not a clearing-house in the accepted term, as the exchanges are still effected daily at the banks by clerks of each institution; but the results of the daily operations are notified to the secretary of the Banks' Exchange Settlement, who establishes the daily credit of each bank with the "pool." The "pool" is placed in the hands of three trustees, and consists of £700,000 in gold, which is deposited in the vaults of three of the banks, and cannot be circulated or disturbed. The contributions to the "pool" are according to the volume of the operations of each bank. The secretary notifies each bank daily of the amount of its credit with the "pool," and no bank is permitted to allow its balance to continue below 25 per cent. of the fixed contribution. In the event of its credit reaching this margin, the bank is required to make up its deficiency with gold; this payment, however, is not made to the "pool," but to such other banks as may happen to have at their credit with the "pool" a larger sum than is required by the agreement. This arrangement enables the £700,000 comprising the "pool" to remain intact.

The volume of the exchanges from the establishment of the "pool" to the end of 1905 is shown in the following table:—

Period.	Amount of Exchanges.
	£
18th Jan. to 31st Dec., 1894	101,242,905
1st „ 30th „ 1895	108,509,860
31st Dec., 1895, to 31st Dec., 1896	117,713,862
1st Jan. to 31st Dec., 1897	121,645,873
„ „ 1898	126,978,018
„ „ 1899	146,188,144
„ „ 1900	144,080,311
„ „ 1901	167,676,707
„ „ 1902	178,637,708
„ „ 1903	180,961,406
„ „ 1904	177,797,335
„ „ 1905	189,826,381

SAVINGS BANKS.

The savings banks are on a very different footing to banks of issue, being to a greater or less extent under State control and otherwise safeguarded, so that they enjoy public confidence. The institutions classed as savings banks may be divided into two kinds—those which, previous to the federation of the Australian States were worked in conjunction with the Post Office, and consequently, directly administered by the State: and those under trustees or commissioners, who are generally nominated by the Government. The declared objects of these banks are to encourage thrift in the working classes, and to provide a safe investment for the funds of charitable institutions, friendly societies, and such like. The institutions, however, have become so popular that all classes of the community are represented amongst their depositors, and the banking crisis of 1893 had the effect of largely increasing their business.

In New South Wales there are both State and trustee institutions for the receipt of savings, the Government Savings Bank having been established in 1871, and the Savings Bank of New South Wales as far back as 1832. In both institutions sums of one shilling and any multiple of that amount may be deposited; but, with the exception of the funds of charitable institutions and friendly societies and trade unions, deposits exceeding £300 do not bear interest on such excess in the Government Savings Banks, and in the case of the Savings Bank of New South Wales deposits made by any one individual exceeding the sum of £200 do not bear interest on the excess, but interest on the full deposit is allowed on funds of any charitable institution, or any legally established friendly or other society. From the 1st January, 1904, the Government Savings Bank allowed interest at the rate of 3 per cent. on all sums deposited, not exceeding a total of £300, to the credit of any one account, friendly and charitable societies being allowed interest on all deposits made. During the year ended 31st December, 1905, the Savings Bank of New South Wales allowed 3½ per cent. on accounts closed during the year, and 4 per cent. for those remaining open at the end of the year. The rate of interest payable on accounts closed during 1906 was 3½ per cent., and in respect of those remaining open on the 31st December, the rate will be fixed by the trustees when the yearly accounts are made up. The accounts of the Savings Bank of New South Wales close on the 31st December, while those of the Government Savings Bank, under the provisions of the Amendment Act, assented to on the 5th December, 1903, are adjusted to the 30th June.

The returns of the savings banks show an enormous development since 1861; at that time the number of depositors in New South Wales was 12,027, with the sum of £557,197 to their credit, or an average of £46 6s. 7d. to each depositor. In 1871 the number of depositors had risen to 23,570, with deposits amounting to £936,465, but the average credited to each depositor was only £39 14s. 7d. In the year 1881 there were 61,531 depositors, with a total of £2,075,856, averaging £33 14s. 9d. for each account. In 1891 the number of depositors had increased to 143,826, and the amounts of deposit to £4,730,469, the average being £32 17s. 10d. In 1901 there were 282,643 depositors, with an aggregate deposit of £10,901,382, or an average of £38 11s. 5d. for each depositor. In 1905-6 the number of depositors had risen to 372,365, with deposits amounting to £14,429,018, giving an average sum of £38 15s. 0d. to each account. It will thus be seen that there has been a decline in the amount per depositor from the period first mentioned; but this is no sign of retrogression, for the large increase in the number of depositors, which must be taken into consideration, evidences the fact that the less affluent classes of the community are more largely represented in the books of the banks than was formerly the case. The following statement shows the number of depositors and amount of deposits at the end of each year in the case of the Government Savings Bank since its establishment in 1871; and since 1860 in respect of the Savings Bank of New South Wales, together with the average amount of deposit per depositor:—

Year ended 31st December.	Government Savings Bank.		Savings Bank of New South Wales.		Total.				
	Number of Depositors.	Amount of Deposits.	Number of Deposits.	Amount of Deposits.	Number of Depositors.	Amount of Deposits.	Average Amount per Depositor.		
	No.	£	No.	£	No.	£	£	s.	d.
1860......	*	*	12,027	557,197	12,027	557,197	46	6	7
1865......	*	*	17,472	744,227	17,472	744,227	42	11	11
1870......	*	*	23,570	936,465	23,570	936,465	39	14	7
1875......	10,799	354,075	30,158	1,295,797	40,957	1,649,872	40	5	8
1880......	24,602	586,496	36,929	1,489,360	61,531	2,075,856	33	14	9
1885......	57,538	1,471,894	49,977	2,016,656	107,515	3,488,550	32	8	11
1890......	83,312	1,875,905	60,514	2,854,564	143,826	4,730,469	32	17	10
1891......	94,520	2,153,463	63,906	3,188,672	158,426	5,342,135	33	14	5
1892......	101,668	2,354,086	66,058	3,351,995	167,726	5,706,081	34	0	5
1893......	114,070	3,233,289	65,657	3,302,469	179,727	6,535,758	36	7	3
1894......	122,795	3,633,925	67,512	3,583,075	190,307	7,217,000	37	18	5
1895......	131,703	4,121,700	71,099	3,951,875	202,802	8,073,575	39	16	2
1896......	140,386	4,372,965	73,222	4,149,658	213,608	8,522,623	39	18	0
1897......	151,343	4,691,833	76,286	4,444,960	227,629	9,136,793	40	2	9
1898......	163,552	5,026,069	78,813	4,454,875	242,365	9,480,944	39	2	4
1899......	179,526	5,485,035	81,300	4,584,399	260,826	10,069,434	38	12	1
1900......	198,014	6,045,622	84,629	4,855,760	282,643	10,901,382	38	11	5
1901......	216,947	6,647,289	89,364	5,161,421	306,311	11,808,710	38	11	0
1902......	230,755	7,100,108	92,457	5,325,356	323,212	12,425,464	38	8	10
1903......	237,389	7,018,425	94,567	5,326,198	331,956	12,344,623	37	3	9
1904......	†254,331	†7,952,885	95,808	5,268,677	350,139	13,221,562	37	15	3
1905......	‡270,982	‡8,883,651	101,383	5,545,367	372,365	14,429,018	38	15	0

* Not open. † To 30th June, 1905. ‡ To 30th June, 1906.

At the 30th June, 1906, the liabilities of the Government Savings Banks amounted to £8,899,826, of which £8,883,651 represented deposits, and £16,175 balance of profit and loss account. The investments made by the Treasury on behalf of the bank were as follows:—

	£
Government Debentures..	165,800
Funded Stock, 36 Vic. No. 21	403,249
,, 56 Vic. No. 1	1,000,000
,, 59 Vic. No. 6	880,000
,, 60 Vic. No. 32	1,000,000
,, 1 Edw. VII. No. 62..	1,000,000
1924 Stock, 58 Vic. No. 14..	20,000
1925 Stock, 59 Vic. No. 6	150,000
Treasury Bills, 59 Vic. No 22	1,019,563
,, 64 Vic. No. 68	355,179
,, 4 Edw. VII No. 8	399,000
,, 5 Edw. VII No. 30..	336,890
Stock issued under the Advances to Settlers Act...............	305,000
Deposit, Bank of New South Wales	300,000
Uninvested funds at credit of Trust Account	1,313,926
Cash in hands of Comptroller, at branches, and in the hands of Postmaster-General..................................	134,259
Interest due and accrued on invested and uninvested funds	116,960
Total	£8,899,826

The Savings Bank of New South Wales was originally administered by nine trustees, one of whom was vice-president; but under an amending Act passed in 1853, since consolidated as the "Savings Bank of New South Wales Act, 1902," the number may be increased, but cannot exceed eighteen. The trustees have power to nominate a managing trustee, who, if not already a trustee, becomes one *ex-officio*. The number of trustees at the end of 1905 was thirteen, exclusive of the managing trustee. Unlike those of the Government

Savings Bank, the funds of this institution are applied to investments of a general nature, such as mortgages, Government and municipal securities, and deposits with banks of issue and the Treasury. The amount invested under each head, including interest accrued, at the close of 1905 was as follows :—

How invested.	Amount.
	£
Mortgages	1,099,915
Government and Municipal Securities	3,179,289
Fixed Deposits :—	
Banks of Issue	1,146,006
Treasury	254,415
"Working Account" (Bank of New South Wales)	92,839
Land and Banking Houses	71,226
Uninvested	28,299
Total £	5,871,989

The reserve fund, depreciation account, and profit and loss account, on the 31st December, 1905, amounted to £270,660. According to the published statements of this institution, it could pay £1 1s. 2¾d. for every £1 liability. The classification of the deposits on the 1st January, 1906, was as follows :—

Classification.	Depositors.	Deposits.	Average per Depositor.		
	No.	£	£	s.	d.
£20 and under	56,449	230,282	4	1	7
Over £20 and under £50	13,114	423,774	32	6	4
£50 and under £100	9,660	690,317	71	9	3
£100 ,, £200	10,791	1,517,542	140	12	7
£200 ,, £300	10,634	2,277,379	214	3	3
£300 and upwards	735	406,073	552	9	7
Total	101,383	5,545,367	54	13	11

The following table shows the number of depositors in the savings banks of the principal countries of the world, the total amount standing at their credit, and the average amount per depositor. The figures are compiled from the latest available returns :—

Country.	Depositors.	Amount of Deposits in Savings Banks.	Average Amount per Depositor.		
	No.	£	£	s.	d.
United Kingdom	11,378,483	200,620,215	17	12	7
Sweden	1,918,035	33,432,136	17	8	7
Norway	766,375	20,285,414	26	9	5
Holland	1,488,944	17,034,250	11	8	10
Austria-Hungary	5,850,880	204,231,947	34	18	1
Belgium	2,088,448	29,142,801	13	19	1
Italy	7,116,137	107,105,499	15	1	0
France	11,845,250	180,650,294	12	5	0
Denmark	1,291,569	42,645,862	33	0	5
Russia	5,113,000	116,743,129	22	16	8
United States	7,696,229	670,139,961	87	1	6
Canada *	216,103	12,774,034	59	2	3
New South Wales	372,365	14,429,018	38	15	0
Victoria	466,752	11,764,179	25	4	1
Queensland	88,026	4,142,791	47	1	3
South Australia	131,649	4,750,192	36	1	8
Western Australia	63,573	2,316,161	36	8	8
Tasmania	51,961	1,387,548	26	14	1
New Zealand	288,349	9,129,788	31	13	3

* Exclusive of £4,739,651 in Special Savings Banks—number of depositors not available.

The figures for the United States are given on the authority of the official statistical abstract, and are, to all appearances, correct.

REGISTERED COMPANIES.

The Land, Building, Investment, and Trading Companies established with the object of making profit and doing general business, may be registered under the Companies Act of 1874; Benefit Building, Investment, Co-operative, and Industrial Societies, worked for the mutual benefit and advantage of the subscribing members only, may be registered under the Friendly Societies' Act of 1873, and the Building and Co-operative Societies Act, 17 of 1902; and Mining Companies, in which the shares carry no liability fall under the No-liability Mining Companies' Act of 1896.

The provisions of the Companies' Act, and the Building and Co-operative Societies' Act, are so framed that they are applicable to nearly all classes of financial institutions, very few of which are now carried on under special Acts. According to the records of the Registrar of Joint Stock Companies, there appeared to be about 983 companies whose registration held good at the 31st December, 1905, but it is believed that in this number are included some companies which have really passed out of existence without the formal and legal steps required by the Act being taken.

Registered companies are required to furnish their shareholders with a periodical balance-sheet, according to a prescribed form, and to forward to the Registrar an annual statement showing the share register and the transactions of the capital account. Besides this, companies registered subsequent to the year 1879, receiving money on deposit within the State, are required to furnish quarterly statements of the average assets and liabilities of their local business in the same manner as banking companies. Of the 983 companies in operation on the 31st December, 1905, having an aggregate nominal capital of £46,274,928, only 12 were returned as receiving money on deposit, the remaining companies, with an exception here and there, conduct their business on the subscribed capital alone. The 983 companies referred to above are exclusive of 18 companies registered under section 8 of the Consolidating Companies Act, No. 40, 1899, the liability of members being limited by guarantee; 2 companies with unlimited liability, under section 9 of the Consolidating Companies' Act, No. 40, 1899; and 23 companies, not for profit, registered under section 52.

The registrations under the Companies Act for the five years ended 1905 were:—

Registrations.	1901.	1902.	1903.	1904.	1905
New Companies registered	88	102	154	127	170
Companies wound-up	37	42	56	64	58
Amount of fees received £	1,189	1,560	2,099	,567	1,901

In the number of companies shown in the above table as wound up are included several defunct companies which have been reconstructed; still, after making all necessary allowances on this point, the five years mentioned show an unusually large number of winding-up notices.

During 1890 most of the deposit, land, building, and investment companies were presumed to be in a flourishing condition. Their dividends to shareholders were very large, and the rates allowed on deposits were considerably in excess of those current in the banks of issue. As might have been expected, the high interest offered was too tempting a bait to be resisted by a section of the investing public, and large sums were placed in these institutions with the utmost confidence that they would be available when required. This confidence, unfortunately, proved to be, in many instances, unmerited. The shrinkage of land values, and the depreciation of real estate generally, put an end to all unsound institutions working on speculative lines, as well as to some other companies that were conducted on reasonable principles. In August, 1891, three of these institutions suddenly suspended payment, and they were followed within a short time by others, several of which were placed in liquidation; while a considerable number of the existing institutions are now carrying on their business under the provisions of the Joint Stock Companies Arrangement Act of 1891, which was passed to afford relief to *bona fide* institutions which, through no fault of their own, became embarrassed. This Act expired on the 1st January, 1896, but Parliament extended its operations until the 1st January, 1899.

The liabilities, assets, and paid-up capital of the twelve deposit companies, for the quarter ended June, 1906, were as follows:—

Companies.	Number.	Liabilities (exclusive of Liabilities to Shareholders).			Assets.			Paid-up Capital.
		Deposits.	Other Liabilities.	Total.	Landed Property.	Other Assets.	Total.	
		£	£	£	£	£	£	£
Investment	10	209,631	255,644	465,275	754,565	353,834	1,108,399	778,268
Trading	2	70,098	331,280	401,378	548,105	3,236,291	3,784,396	2,300,000
Total	12	279,729	586,924	866,653	1,302,670	3,590,125	4,892,795	3,078,268

The difficulties into which the deposit companies fell may for the most part be attributed to their practice of borrowing money for short periods, and locking it up for long terms. Besides this, however, many so-called building societies indulged in speculative land purchases, and having retailed the land at enhanced prices, with payments over extended periods, proceeded to divide the presumed profits among the shareholders, with a result that might easily have been foreseen, for in many cases the purchasers, after paying a few instalments towards the price, left the allotments on the hands of the companies, whose anticipated profits were, therefore, purely visionary, and whose dividends were really never earned, but, in many instances, were merely taken from the deposits.

BENEFIT BUILDING AND INVESTMENT SOCIETIES.

According to the provisions of the Friendly Societies Act of 1873 relating thereto, and since consolidated under the Building and Co-operative Societies Act (17 of 1902), any number of persons may form themselves into a Benefit Building and Investment Society for the purpose of raising money by subscription to enable members to erect and purchase dwellings, &c., which must be secured to the society by mortgage until the amount of the shares has been fully paid. These institutions, as previously mentioned, are established solely for the benefit and advantage of the subscribing members, and their operations are, as a rule, confined to the subscriptions. There were, however, 7 institutions in 1905 receiving money on deposit from the general public, the aggregate amount of which was £387,803. Up to the close of 1905 the Benefit Building and Investment Societies which had been registered under the Friendly Societies Act and the Building and Co-operative Societies Act (17 of 1902) numbered 158, of which only 41 were in operation at that date. Of the other institutions, some had ceased to exist through being Terminating Societies; others had become Limited Companies under the Companies Act, and consequently ceased to operate under the Friendly Societies Act; and a large number had become defunct.

Returns have been received from 41 institutions operating. The liabilities and assets, &c., of these 41 societies at the date of their latest balance-sheets were as follow :—

Societies.	Number.	Liabilities (exclusive of Liabilities to Shareholders).			Assets.			Paid-up Capital and Contingency Funds.
		Deposits.	Other Liabilities.	Total.	Advances.	Other Assets.	Total.	
		£	£	£	£	£	£	£
Starr-Bowkett	22	Nil.	13,836	13,836	104,355	19,662	124,017	99,365
Building	5	1,541	3,096	4,637	31,931	4,614	36,545	30,779
Building and Investment	11	106,615	9,360	115,975	252,782	23,914	276,696	153,372
Land, Building, and Investment.	3	279,647	5,544	285,191	368,060	77,753	445,813	144,216
Total	41	387,803	31,836	419,639	757,128	125,943	883,071	427,732

The amount of paid-up capital and contingency funds shown is exclusive of a net amount of £35,701 at credit of profit and loss account.

CO-OPERATIVE TRADING SOCIETIES.

The provisions of the Act relating to Co-operative Societies have been made use of by the public to a very limited extent. Ninety-one societies have been registered since the Act came into force, but of these there were not more than thirty in existence at the end of 1905. The purposes for which the 30 societies now in existence were formed are as follows :—General purposes, 22; public halls, 1; bakery, 2; dispensaries, 3; gardening, 1; and bootmaking, 1.

The workings of the Co-operative Societies during the years 1904 and 1905 will be seen below.

Liabilities.	1904.	1905.	Assets.	1904.	1905.
	£	£		£	£
Share Capital	42,537	55,443	Freeholds	26,453	27,344
Reserves	26,135	29,272	Stocks	53,801	65,357
Other Liabilities	28,195	33,148	Other Assets	39,112	48,174
Profits	22,499	23,012			
			Total	119,366	140,875
Total	119,366	140,875			

The progress during the year 1905 was very satisfactory. Share capital increased by 30 per cent., and reserves by 12 per cent. Freeholds increased by 3 per cent., and stocks by 21 per cent. The proportion of profits to capital and reserves combined was 27 per cent. in 1905, as against 33 per cent. in 1904. Considering the small amount of capital invested, the results obtained were surprisingly good.

NO-LIABILITY MINING COMPANIES.

Under the No-Liability Mining Companies Act of 1896, which repealed the 1881 Act, since superseded by the Consolidating Companies Act, No. 40, 1899, shareholders in any mining company registered under the Act are not liable to be sued for calls or contributions, but they are not entitled to receive dividends on shares upon which a call is due and unpaid; if calls are made, and not paid within fourteen days after the expiration of the period fixed for payment, the shares are forfeited. Companies registered under this Act are also subject to certain provisions of the Companies Act of 1874. The total registrations during the last ten years numbered only 336; it would therefore appear that, in spite of the low registration fees, the provisions of the Act are not very largely made use of. The registrations during the last ten years were as follow:—

Year.	Registrations.	Year.	Registrations.
1896	44	1901	32
1897	36	1902	27
1898	33	1903	29
1899	47	1904	14
1900	51	1905	23

REGISTRATION OF FIRMS.

Under the Registration of Firms Act, 1902, every firm carrying on business or having any place of business in the State under a firm name which does not consist of the full or usual names of all the partners without any addition, and every person carrying on business or having any place of business under any firm name consisting of or containing any name or addition other than the usual name of that person, must register the name under which the business is or is intended to be carried on. Firms are required to register with the Registrar-General disclosing the firm name, nature of the business, the place where business is carried on, the full name, usual residence and other occupation, if any, of the members of the firm, and where the business is begun after the commencement of the Act, the date of such commencement, and a penalty is attached for non-registration.

The Act came into force on the 1st January, 1903, and the transactions for each year since are as follows:—

Year.	Statements, including Original Registrations and subsequent changes.	Declarations by Agents and Attorneys to accompany Statements.	Inspections.	Total Fees.
	No.	No.	No.	£
1903	12,318	294	3,591	3,301
1904	1,817	39	1,280	540
1905	1,493	22	1,285	456

TOTAL DEPOSITS IN BANKS AND INVESTMENT COMPANIES.

The amount of deposits at the end of each of the last ten years in the Banks of Issue, the Savings Banks, and the Building and Investment Companies is given in the subjoined table. The increase since 1896 was rapid, not only absolutely, but also as compared with the increase in population. During the period of ten years embraced in the table the deposits fluctuated between £39,693,955 and £52,307,037, the rate per head being £35 7s. 6d. in 1905 as compared with £31 0s. 9d. in 1896. The amount under each head on the 31st December of each year was as follows :—

Year.	Deposits.						
	In Banks of Issue.	In Savings Banks.	In Building and Investment Companies.	Total.	Amount per head of Population.		
	£	£	£	£	£	s.	d.
1896	29,835,916	8,522,623	1,335,416	39,693,955	31	0	9
1897	29,606,735	9,136,793	1,078,696	39,822,224	30	11	10
1898	29,852,711	9,480,944	1,087,095	40,420,750	30	11	0
1899	31,428,025	10,069,434	1,132,305	42,629,764	31	14	4
1900	32,233,591	10,901,382	1,167,083	44,302,056	32	9	4
1901	33,258,456	11,808,710	1,035,954	46,103,120	33	8	4
1902	33,059,882	12,425,464	1,461,322	46,946,668	33	8	1
1903	32,577,861	12,344,623	1,299,052	46,221,536	32	5	9
1904	33,281,275	13,221,562	1,261,221	47,764,058	33	0	5
1905	37,071,054	14,429,018	806,965	52,307,037	35	7	6

The deposits in investment and building companies for the ten years are inclusive of the amounts deposited in benefit, building, and investment societies registered under the Friendly Societies Act, viz. :—£424,292 in 1896, £319,335 in 1897, £306,492 in 1898, £299,604 in 1899, £283,690 in 1900, £327,135 in 1901, £318,435 in 1902, £357,789 in 1903, £369,295 in 1904, and £387,803 in 1905.

TRADE MARKS.

The Trade Marks Act of 1865 provides for the registration of trade marks and for the prevention of the fraudulent marking of merchandise. During the forty-one years the Act has been in force, 9,537 trade marks, or an average of 232 per annum, have been registered, the average of the last few years being considerably in excess of that for the whole period. The more careful discrimination now exercised with regard to the designs submitted has had the effect of bringing the Act into greater favour. The registration of a trade mark does not confer any patent rights, but acts as a commercial safeguard and as an encouragement to manufacturers to produce goods of a superior quality.

The goods or manufactures which may be protected by trade marks are classified for the purposes of efficient registration into fifty main divisions; the fees, however, are the same for each class. The transactions under the Act and the fees received during each of the five years ended 1905 were as follow :—

Transactions.	1901.	1902.	1903.	1904.	1905.
Applications for trade marks	436	471	412	484	616
New trade marks granted	380	412	332	419	413
Trade marks transferred	87	90	141	180	57
Amount of fees received £	1,399	1,513	1,447	1,568	1,595

The figures given do not wholly apply to registrations of local manufacturers, as trade marks, like patents, are unprotected in the State if not registered locally. The registration fees are a source of income to the State, as an application for registration costs three guineas, and a transfer of a trade mark one guinea; no charges are, however, made for applications withdrawn or refused. The fees collected during 1905 amounted to £1,595, or £306 less than those received for registrations under the Companies Act.

CURRENCY.

The British sovereign is the only universal currency in Australia, for while the coins circulating within the Commonwealth are those of the United Kingdom, gold is the standard, the silver and bronze current being more properly tokens than coins. The banks of issue make use of bank notes, but these are not legal tender in any State, and do not circulate beyond the State in which they are issued. Gold coins are legal tender to any amount; silver for an amount not exceeding forty shillings; and bronze for one shilling. The standard weight and fineness of each coin are given in the following statement. The least current weight of a sovereign is 122·5 imperial grains, and of a half-sovereign 61·125 grains:—

Denomination of Coin.		Standard Weight.	Standard Fineness.
		Imperial grains. Troy.	
Gold	Sovereign	123·27447	Eleven-twelfths fine gold, or decimal fineness 0·91666, and one-twelfth alloy.
	Half-sovereign	61·63723	
Silver	Crown	436·36363	Thirty-seven-fortieths fine silver, or decimal fineness 0·925, and three-fortieths alloy.
	Double Florin	349·09090	
	Half-crown	218·18181	
	Florin	174·54545	
	Shilling	87·27272	
	Sixpence	43·63636	
	Threepence	21·81818	
		Avoirdupois.	
Bronze	Penny	145·83333	Mixed Metal:—Copper, 95 parts; tin, 4 parts; and zinc, 1 part.
	Halfpenny	87·50000	
	Farthing	43·75000	

The only coins struck at the Sydney Mint are those of gold, though silver and bronze of English coinage are also issued. The Governments of New South Wales and Victoria, however, were successful towards the end of 1898 in inducing the Imperial authorities to concede to them the privilege of coining silver and bronze for circulation in the Commonwealth, and to retain the profits of the coinage, but no advantage has been taken of the concession up to the present.

Standard or sovereign gold has a fineness of 22 carat, and is worth £3 17s. 10½d. per oz.; pure gold, or 24 carat, is worth £4 4s. 11$\frac{5}{11}$d. per oz. The whole of the gold contained in deposits sent to the Sydney Branch of the Royal Mint for melting, assaying, and coining is accounted for at the rate of £3 17s. 10½d. per oz. standard or sovereign gold, while the average price by the Melbourne Mint in 1898, the latest year for which information is available, was only £3 17s. 8⅝d. per oz.

Standard silver is 0·925 fine. Owing partly to its greatly increased production, and still more to its demonetisation in a large part of Europe, and the restrictions placed upon its free coinage in countries which still have a double standard of coinage, its value has decreased by nearly 53 per cent. during the last thirty years. The average price of standard silver in the London market for each year since 1873 is given in the annual reports of the Deputy Master of the Royal Mint as follows :—

Year.	Price per standard oz.	Year.	Price per standard oz.	Year.	Price per standard oz.
	d.		d.		d.
1873	59¼	1884	50 11/16	1895	29⅞
1874	58 5/16	1885	48⅝	1896	30¾
1875	56 13/16	1886	45⅜	1897	27 9/16
1876	53	1887	44⅝	1898	26 15/16
1877	54¾	1888	42⅞	1899	27½
1878	52 9/16	1889	42 11/16	1900	28 5/16
1879	51 3/16	1890	47¾	1901	27¼
1880	52¼	1891	45 1/16	1902	24⅛
1881	51¾	1892	39 13/16	1903	24¾
1882	51 13/16	1893	35⅝	1904	26⅜
1883	50 9/16	1894	29	1905	27 13/16

The fluctuations in its value during 1905 are shown in the following table of average monthly prices :—

Month.	Price per standard oz.	Month.	Price per standard oz.	Month.	Price per standard oz.
	d.		d.		d.
January	27 15/16	May	26 11/16	September	28½
February	28 1/16	June	26 15/16	October	28⅝
March	26 3/16	July	27 3/16	November	29½
April	26⅛	August	27 15/16	December	30

The nominal value of one pound (avoirdupois) of bronze coined into pence is 4s., and into halfpence or farthings 3s. 4d.

The Sydney Branch of the Royal Mint was opened on the 14th May, 1855, and the weight of gold sent for coinage to the 31st December, 1905, was 30,661,544 oz., valued at £113,146,812. Of this quantity New South Wales produced 10,453,896 oz., of the value of £39,024,000, the amount from each source being :—

Where produced.	Weight.	Value.
	oz.	£
New South Wales	10,453,896	39,024,000
Victoria	1,443,188	5,924,993
Queensland	14,609,890	51,825,010
South Australia	86,488	303,122
Western Australia	14,047	50,880
Tasmania	128,800	452,299
New Zealand	3,613,793	14,379,044
Other Countries	50,218	174,261
Old Coin, &c.	261,224	1,013,203
Total	30,661,544	113,146,812

Nearly the whole of the gold won in New South Wales and Queensland, and also a small portion of the produce of the other States and New Zealand, is received at the Sydney Mint for coinage. The total value of the gold raised in Australasia to the end of 1905 amounted to £527,627,872, of which £113,146,812, or 21·44 per cent., passed through the Mint of this State. The value of gold coin and bullion issued up to the end of 1905 was £112,942,[illegible] of which £108,096,500 worth of gold was converted into coin, the value of sovereigns and half-sovereigns being:—

Year.	Sovereigns.	Half-sovereigns.	Total.
	£	£	£
1855 to 1890	62,105,500	2,420,500	64,526,000
1891	2,596,000	77,000	2,673,000
1892	2,837,000	....	2,837,000
1893	2,844,000	125,000	2,969,000
1894	3,067,000	....	3,067,000
1895	2,758,000	....	2,758,000
1896	2,544,000	....	2,544,000
1897	2,532,000	....	2,532,000
1898	2,548,000	50,000	2,598,000
1899	3,259,000	65,000	3,324,000
1900	3,586,000	130,000	3,716,000
1901	3,012,000	....	3,012,000
1902	2,813,000	42,000	2,855,000
1903	2,806,000	115,500	2,921,500
1904	2,986,000	....	2,986,000
1905	2,778,000	....	2,778,000
Total	105,071,500	3,025,000	108,096,500

The first issue of bronze from the Sydney Mint took place in 1868, but it was not until 1879 that silver coin was issued, the respective values of each to the end of the year 1905 being—bronze, £72,850; and silver, £882,800. The amount of each particular currency issued to the end of 1905 is shown in the following table:—

Year.	Silver Coin.							Bronze Coin.
	Crowns and Double Florins.	Half-crowns.	Florins.	Shillings.	Six-pences.	Three-pences.	Total.	
	£	£	£	£	£	£	£	£
1868 to 1890	1,200	113,400	86,400	116,150	35,300	49,900	396,350	34,025
1891	......	2,000	1,800	4,100	5,100	4,200	17,200	1,960
1892	......	1,500	4,000	4,300	2,500	1,625	13,925	2,065
1893	......	2,800	2,300	3,500	1,000	425	10,025	840
1894	......	1,900	1,100	900	1,500	900	6,300	505
1895	100	900	700	250	300	2,500	4,750	1,260
1896	......	2,100	2,300	4,200	1,300	900	10,800	2,880
1897	......	2,000	2,000	4,600	800	7,850	17,250	1,890
1898	......	21,800	7,000	5,000	1,000	5,000	39,800	3,940
1899	......	19,200	17,000	10,000	8,000	7,600	61,800	2,830
1900	......	50,000	40,000	25,000	13,000	11,400	139,400	4,100
1901	......	25,000	23,000	24,000	5,000	6,400	83,400	5,500
1902	......	200	1,000	1,000	4,800	4,800	11,800	3,000
1903	......	2,400	4,200	2,800	1,400	5,200	16,000	3,720
1904	......	23,600	6,800	200	5,600	7,000	43,200	2,320
1905	......	3,800	......	......	3,600	3,400	10,800	2,000
Total ... £	1,300	272,600	199,600	200,000	90,200	119,100	882,800	72,850

It has already been pointed out that standard silver comprises ·925 pure metal and ·075 alloy. Standard silver of the weight of one pound troy is coined into sixty-six shillings—that is to say 11·1 oz. of fine metal produces coin to the value of £3 6s. The average price of silver during 1905 was 2s. 3$\frac{13}{16}$d. per oz., which for 11·1 oz. gives the sum of £1 5s. 8$\frac{23}{32}$d.; and as the difference between the nominal value of silver and the average price per standard oz. represents the seigniorage or gross profit, it will be seen that after full allowance is made for mint expenses and the loss incurred by the purchase of worn silver at its nominal value, the British Government derives a fairly large profit from the silver coin issued in the Commonwealth. The demand for silver is, however, necessarily limited, the average annual issue of silver coin by the Sydney Mint for the twenty years ended 31st December, 1905, being about £29,200.

The gold bullion issued by the Mint is partly pure gold in small quantities for the use of jewellers, chemists, and others, but the bulk consists of small fine gold bars which is exported to India. The total amount of gold bullion issued during 1905 was valued at £767,422, and to the end of 1905 at £4,847,113.

Worn gold coins have been received at the Mint for recoinage since 1876, and silver coins since 1873. The nominal value of gold coin withdrawn from circulation during 1905 was only £211, and for the whole period since the opening of the Mint, £827,469.

Silver coin of the value of £5,611 was withdrawn during 1905. The aggregate value of silver coin withdrawn was £229,872, and this was forwarded to London for recoinage.

The expense of the Sydney Branch of the Royal Mint is borne by the local Government, £15,000 being set apart annually for that purpose. Special votes for construction, repairs, and furniture have, however, been passed occasionally, as will be seen from the subjoined table, which shows the total cost of administration, as well as the net cost to the State for the last ten years. The falling-off in 1897 was chiefly caused by the diminished profits on the silver account.

Year. ended 31st December.	Actual Expenditure from Consolidated Revenue.			Mint Receipts (paid into Consolidated Revenue).	Net Annual Charge to State for working of Mint.
	On Ordinary Administration (including Pensions, Stores, and Stationery).	On Construction, Repairs, and Furniture.	Total.		
	£	£	£	£	£
1896	14,277	493	14,770	14,847	*77
1897	13,866	7,668	21,534	11,702	9,832
1898	14,185	3,771	17,956	13,433	4,523
1899	14,488	467	14,955	15,610	*655
1900	14,823	669	15,492	18,857	*3,365
1901	14,599	11	14,610	18,211	*3,601
1902	14,933	97	15,030	15,396	*366
1903	14,931	72	15,003	19,408	*4,405
1904	14,953	221	15,174	21,739	*6,565
1905	15,171	376	15,547	19,422	*3,875

* Excess receipts.

The receipts of the Mint, which are paid into the Consolidated Revenue, are made up of charges for coining gold, fees for assays, &c., and profits on sale of silver. The Mint pays for all silver contained in deposits in excess of 8 per cent. of the gross weight at a rate fixed by the Deputy Master from time to time. On the 12th May, 1902, the rate was proclaimed at 1s. 6d. per oz. fine, and this is still ruling. The Melbourne Mint pays also for silver in excess of 8 per cent., the average price being fixed monthly by the Deputy Master. In February, 1905, the price varied from 1s. 5d. to 2s. 3d. per oz. fine, according to the value of the assays.

From the 1st January, 1901, amended regulations were adopted for the coinage of gold and the charges were considerably reduced. No distinction is made between gold raised in New South Wales and that raised in any of the other States.

The new regulations are as follow:—

For assaying and coining—1d. per oz. standard.

For melting and refining—

Deposits of 500 oz. and under—3d. per oz. gross; deposits of over 500 oz. and under 1,000 oz.—2d. per oz. gross; deposits of more than 1,000 oz.—1d. per oz. gross; deposits containing more than 5 per cent. of base metal—1s. per oz. of base metal, in addition to the above charges for melting, &c. The minimum charge on any one deposit is 6s., except in the case of deposits containing more than 5 per cent. of base metal, when the minimum charge is 10s. 6d.

The Melbourne Mint charges on all gold are 1½d. per oz. for parcels of 1,000 oz. and upwards, and 2d. per oz. for parcels of 500 oz. to 1,000 oz., and under 500 oz. 3d. per oz., with a minimum charge of 6s. A comparison of the Melbourne charges with those of Sydney shows that the rates are identical for parcels up to 1,000 oz., but for large quantities the rate is 50 per cent. higher in Melbourne than in Sydney. Under the old regulations which have been repealed, up to 500 oz. the Melbourne charges were 2d. against 5d. in Sydney; for parcels from 500 oz. to 1,000 oz. they were 2d. in Melbourne against 3d. in Sydney; from 1,000 oz. to 5,000 oz., 1½d. in Melbourne against 3d. in Sydney; and for over 5,000 oz., 1½d. in Melbourne against 1d. in Sydney. While, therefore, the Melbourne charges on large parcels were 50 per cent. in excess of the Sydney charges, they were very much lower in the case of small parcels, and amount to only 40 per cent. of the Sydney charges for parcels under 500 oz. Under the new regulations, however, the Sydney rates are 50 per cent. lower for parcels of 1,000 oz. and over, while for deposits up to 1,000 oz. the rates are equal.

The total receipts of the Mint since its establishment in 1855 are shown below:—

Year.	Mint Charges.		Profit on Sale of Silver.	Fees for Assays and Crushings, and Proceeds of Sweep.	Total Mint Receipts (paid into Consolidated Revenue).
	On New South Wales Gold.	On Gold of other States or Countries.			
	£	£	£	£	£
1855 to 1890	269,533	143,575	59,282	60,993	533,383
1891	2,881	3,854	5,319	1,875	13,929
1892	2,938	3,893	3,164	1,657	11,652
1893	3,624	3,713	4,290	1,571	13,198
1894	4,439	3,759	5,402	3,105	16,705
1895	3,832	3,125	5,058	2,495	14,510
1896	3,487	2,956	5,058	3,346	14,847
1897	3,317	3,259	2,962	2,164	11,702
1898	3,627	3,184	3,896	2,726	13,433
1899	3,630	3,659	5,391	2,930	15,610
1900	3,321	4,217	7,855	3,464	18,857
1901	*9,623	......	6,572	2,016	18,211
1902	*8,108	......	5,254	2,034	15,396
1903	*8,793	......	8,499	2,116	19,408
1904	*11,145	......	8,869	1,725	21,739
1905	10,158	......	8,196	1,068	19,422
Total	531,650		145,067	95,285	772,002

* Includes charges on gold of other States or countries, particulars of which are no longer kept separately.

MOVEMENTS OF GOLD.

Since the discovery of gold in the year 1851 large quantities of that metal —in the form of coin as well as bullion—have been exported from Australasia every year. The returns of gold imported to and exported from each of the

States and New Zealand, calculated for ten-year periods from the year 1851 to the end of 1904, are given herewith. The tables also show the amount by which the exports have exceeded the imports in the various States, or *vice versa*, as the case may be. The largest exporters of gold, it will be found, are the largest producers, viz., Victoria, New Zealand, and Queensland. The other States now produce very little more than suffices to meet their local requirements. The returns of the gold imports and exports for New South Wales, it must be remembered, are swollen by large quantities of Queensland gold, which is simply sent to Sydney to be minted, and then exported in the shape of coin. A large proportion of the export of gold coin during the last few years has gone to the United States, the quantity shipped thereto in 1898 from Sydney alone being valued at £5,615,000, in 1899 at £1,982,000, in 1900 at £3,701,156, in 1901 at £2,150,363, in 1902 at £1,601,000, in 1903 at £1,500,000, in 1904, £1,161,000, while in 1905 it was only £338. The imports and exports for each State and New Zealand were as follow :—

State.	Imports of Gold.					
	1851–60.	1861–70.	1871–80.	1881–90.	1891–1900.	1901–5.
	£	£	£	£	£	£
New South Wales	3,874,764	12,148,037	13,308,140	18,018,550	32,805,136	19,347,998
Victoria	4,349,457	11,821,815	10,868,837	7,486,861	17,093,654	5,518,061
Queensland	......	367,025	1,383,822	2,582,705	2,962,994	1,367,390
South Australia	1,091,012	882,149	1,622,202	1,919,341	2,169,239	1,007,087
Western Australia	......	19,310	39,710	228,664	2,529,373	......
Tasmania	......	59,500	402,446	569,958	414,559	277,928
Commonwealth	9,315,233	25,297,836	27,625,157	30,751,069	57,974,955	27,518,464
New Zealand	170,328	1,727,925	2,312,327	2,780,009	2,265,471	2,091,843
Australasia	9,485,561	27,025,761	29,937,484	33,531,078	60,240,426	29,610,307

State.	Exports of Gold.					
	1851–60.	1861–70.	1871–80.	1881–90.	1891–1900.	1901–5.
	£	£	£	£	£	£
New South Wales	12,211,831	25,804,687	18,557,134	18,296,059	40,284,190	21,144,250
Victoria	90,691,591	74,430,857	48,091,460	30,598,232	38,996,916	20,468,597
Queensland	......	2,135,600	10,813,959	14,072,950	24,633,823	13,723,175
South Australia	2,991,967	486,516	521,893	1,245,793	3,377,261	923,602
Western Australia	......	38,896	1,710	179,334	21,796,360	38,885,019
Tasmania	843,029	25,245	567,496	1,442,712	2,013,817	1,052,479
Commonwealth	106,738,418	102,921,801	78,553,651	65,830,080	131,102,367	96,197,122
New Zealand	219,309	22,022,747	16,527,470	10,417,390	11,704,181	9,888,692
Australasia	106,957,727	124,944,548	95,081,121	76,247,470	142,806,548	106,085,814

The excess of exports of gold during each of the periods shown, was as follows :—

State.	1851–60.	1861–70.	1871–80.	1881–90.	1891–1900.	1901–5.
	£	£	£	£	£	£
New South Wales	8,337,067	13,656,650	5,248,994	277,509	7,479,054	1,796,252
Victoria	86,342,134	62,609,042	37,222,632	23,106,371	21,903,262	14,950,536
Queensland	....	1,768,575	9,430,137	11,540,245	21,670,829	12,355,785
South Australia	1,900,955	*395,633	*1,100,309	*673,548	1,208,022	*83,485
Western Australia	....	19,586	*38,000	*44,320	19,266,987	38,885,019
Tasmania	843,029	*34,255	165,040	872,754	1,599,258	774,551
Commonwealth	97,423,185	77,623,965	50,928,494	35,079,011	73,127,412	68,678,658
New Zealand	48,981	20,294,822	14,215,143	7,637,381	9,438,710	7,796,849
Total excess of exports	97,472,166	97,918,787	65,143,637	42,716,392	82,566,122	76,475,507
Average per annum	9,747,217	9,791,879	6,514,364	4,271,639	8,256,612	15,295,101

* Excess of Imports.

COIN IN CIRCULATION.

Estimates have been framed from time to time purporting to show the amount of coin in private hands. On the authority of the Mint tables have been published, which were compiled from the statistics of gold and silver imported and exported. For 1896 the amounts were :—

Coinage.	Total.	Per Inhabitant.
	£	£ s. d.
Gold	4,536,882	3 10 4
Silver	398,205	0 6 2
Bronze	34,633	0 0 6
Total........................	4,969,720	3 17 0

In the report of the Sydney Branch of the Royal Mint for 1896, however, the then Deputy-Master drew attention to the fact that it was desirable to devise a more accurate method of ascertaining the coin in private hands, as the previous estimates were not reliable.

As showing how gold leaves the State without any record of it being taken, it has been contended that passengers by outward steamers usually carry with them a supply of gold which greatly exceeds the amount brought to the State by passengers inward. This may be conceded, inasmuch as passengers commencing the voyage would naturally be possessed of a larger stock of money than those whose voyage is practically over. Early in 1892 the general manager of one of the principal banks in Sydney obtained returns from the three banking institutions with the largest receiving business, and it was found that the coin paid in was equal to precisely half the value of the notes deposited at the same time. From this it has been claimed that the coin in private hands is not more than half the note issue outstanding, which at the time the estimate was made was not more than £1,450,000. On this assumption the coin in private hands would have been £725,000, as compared with £4,416,000 estimated by the Mint as being the probable quantity at the same period. While not maintaining the absolute accuracy of the latter estimate, it may be pointed out that there are many sound reasons why the estimate of £725,000 should not be entertained. Bank notes are continued in circulation by several of the banks until they are practically worn out, and a large number of persons not over fastidious have strong objections to carrying notes about their persons when gold can be procured. The assumption that coin is withdrawn in large quantities by outward-bound passengers may be correct so far as gold is concerned, but not so as regards silver. It is, therefore, probable that the silver remains in the country, and the estimate of the Mint in regard to that metal may be accepted with some deduction for coin lost or destroyed. Another source of the accumulation of coin in private hands is hoarding, which recent events prove to be quite a common practice in the State, and the indestructible and unimpeachable sovereign is naturally preferred to the perishable bank note. Lastly, a large proportion of the half-sovereigns issued remains in circulation with silver as till-money, and not being paid into the banks would not be subject to the conditions of the estimate of the banking authority already alluded to.

An estimate, founded partly on the records and partly on observation, has been made, and shows that the estimate of the Mint must be abandoned as being too high, and the amount of coin in private hands may be approximately stated as follows:—

	£
Gold	2,030,000
Silver	416,000
Bronze	40,000
Total	£2,486,000

This is equal to £1 13s. 3d. per inhabitant at the close of 1905. To the sum shown must be added £1,430,335 note circulation; so that the total active currency would appear to be about £3,916,335, or £2 12s. 4d. per inhabitant. As, however, the note issue is fully covered by gold in Australasia, it is omitted from the following tables, in which, on the other hand, the coin held by banks is included for the sake of comparison. Including bank reserves, the gold and silver held in Australasia at the end of 1904 amounted to no less than £6 15s. 6d. per inhabitant—a sum only 5s 7d. below that shown for France, and considerably in excess of that shown for any other European country. The figures given in the tables are published on the authority of the Director of the United States Mint, Washington. The total stocks of money held in various countries in December, 1904, were as follow:—

Country.	Gold.	Silver.			Uncovered Paper.
		Full Tender.	Limited Tender.	Total.	
	£	£	£	£	£
United Kingdom	109,576,654	....	23,304,582	23,304,582	24,270,447
Austria-Hungary	62,679,819	....	16,378,956	16,378,956	11,241,266
Belgium	6,165,228	3,082,614	1,993,424	5,076,038	22,996,301
Bulgaria	390,464	184,957	205,508	390,465	842,581
Denmark	3,575,832	....	1,274,147	1,274,147	2,198,931
Finland	904,233	....	82,203	82,206	1,870,119
France	190,382,244	71,393,341	13,090,834	84,484,175	22,790,703
Germany	182,223,591	7,624,332	35,573,366	43,197,698	34,895,191
Greece	1,150,637	20,551	....	20,551	3,329,223
Italy	27,003,699	2,363,337	2,897,657	5,260,994	30,969,996
Netherlands	7,401,028	10,850,801	822,030	11,672,831	10,521,989
Norway	1,397,461	....	616,521	616,521	1,274,147
Portugal	1,089,190	....	1,726,264	1,726,264	12,741,471
Roumania	2,187,279	....	123,304	123,304	2,322,236
Russia	161,056,309	....	20,941,225	20,941,225	....
Servia	678,175	....	308,261	308,261	513,769
Spain	14,817,098	....	35,696,671	35,696,671	25,709,001
Sweden	4,151,258	....	1,561,857	1,561,857	6,021,373
Switzerland	6,083,025	....	2,198,931	2,198,931	2,189,931
Turkey	10,275,380	6,165,228	2,055,076	8,220,304	....
China	....	71,927,661	....	71,927,661	....
India	54,027,949	124,085,401	....	124,085,491	6,658,446
Japan	10,850,801	....	8,487,464	8,487,464	20,797,369
Siam	205,508	4,582,819	....	4,582,819	....
Straits Settlements	....	3,288,121	657,624	3,945,745	4,110,152
South Africa	11,508,426	....	4,110,105	4,110,105	....
Egypt	17,879,161	....	3,082,614	3,082,614	....
Canada	10,789,149	....	1,376,901	1,376,901	13,378,545
Central American States*	411,015	1,150,842	....	1,150,842	10,974,106
Cuba	4,110,152	....	1,027,538	1,027,538	....
Haiti	205,508	205,508	308,261	513,769	719,278
Mexico	1,767,365	10,850,801	....	10,850,801	10,049,322
South American States	21,701,608	780,929	2,815,454	3,596,383	296,463,616
United States	277,065,851	117,796,958	22,996,301	140,793,259	115,063,707
Australasia	26,428,278	....	1,253,596	1,253,596	....

*Exclusive of Costa Rica and British Honduras.

The amounts per inhabitant for the same countries are shown below :—

Country.	Gold.			Silver.			Uncovered Paper.			Total.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
United Kingdom	2	10	8	0	10	9	0	11	3	3	12	8
Austria-Hungary	1	7	7	0	7	3	0	4	11	1	19	9
Belgium	0	18	5	0	15	2	3	8	8	5	2	3
Bulgaria	0	2	1	0	2	1	0	4	6	0	8	8
Denmark	1	9	0	0	10	4	0	17	10	2	17	2
Finland	0	6	6	0	0	7	0	13	5	1	0	6
France	4	17	9	2	3	4	0	11	8	7	12	9
Germany	3	4	8	0	15	4	0	12	5	4	12	5
Greece	0	9	5	0	0	2	1	7	4	1	16	11
Italy......	0	16	7	0	3	3	0	19	1	1	18	11
Netherlands	1	6	10	2	2	4	1	18	2	5	7	4
Norway	0	12	5	0	5	6	0	11	4	1	9	3
Portugal	0	4	0	0	6	4	2	7	0	2	17	4
Roumania.....................	0	7	2	0	0	5	0	7	9	0	15	4
Russia	1	2	9	0	3	0	....			1	5	9
Servia	0	5	5	0	2	5	0	4	2	0	12	0
Spain	0	15	11	1	18	4	1	7	8	4	1	11
Sweden	0	15	9	0	5	11	1	2	11	2	4	7
Switzerland.....................	1	15	6	0	12	10	0	12	10	3	1	2
Turkey.....................	0	5	2	0	4	2	....			0	9	4
China	....			0	3	4	....			0	3	4
India	0	3	8	0	8	5	0	0	5	0	12	6
Japan	0	4	6	0	3	7	0	8	8	0	16	9
Siam.....................	0	0	8	0	15	1	....			0	15	9
Straits Settlements.......	....			7	0	4	7	6	2	14	6	6
South Africa	2	1	0	0	14	8	....			2	15	8
Egypt	1	16	9	0	6	4	....			2	3	1
Canada.....................	2	0	2	0	5	2	2	9	10	4	15	2
Central American States	0	1	11	0	5	4	2	11	0	2	18	3
Cuba.....................	2	12	3	0	13	1	....			3	5	4
Haiti	0	2	11	0	7	2	0	10	1	1	0	2
Mexico.....................	0	2	7	0	15	11	0	14	9	1	13	3
South American States...	0	11	4	0	1	10	7	14	1	8	7	3
United States..............	3	12	10	1	17	0	1	10	3	7	0	1
Australasia	5	10	1	1	5	6	....			6	15	6

PAPER CURRENCY.

Paper or bank-notes have long formed part of the currency of Australia, and until the discovery of gold and the establishment of the local mints, paper was the principal means of effecting exchanges. As will be seen by a subsequent table, the note circulation compared with population was formerly much greater than it is at the present time. Several causes have tended to bring about the reduction which these figures indicate. Amongst the principal may be mentioned first the spread of banking facilities, accompanied by an increased use of cheques for the settlement of accounts, which have had the effect of decreasing the amount of currency (coin and notes) required to be kept in circulation; and secondly, the taxing of the note issue which has had the effect of so reducing the profit to the banks arising from their circulation that the issue of notes is not made a feature of banking business in the large cities, although the possession of the right to issue notes is valuable in the country districts, as the necessity of maintaining gold reserves in branch banks is thereby obviated. There is also another cause operating against an increase in the circulation. In some of the States, the notes are issued by the banks again and again, so that they become eventually torn and dirty, and their use becomes repugnant to many people. This, of course, is not a complaint of recent origin; probably the bank-note is cleaner at the present time than was formerly the rule, but the ordinary condition of an Australian note compares very unfavourably with that of a Bank of England note, or of any other bank-note which is frequently renewed.

The banks acquire their right to issue notes either under the authority of a Royal Charter, or a Special Act of Parliament, but in some States the power to issue notes is assumed by the banks, these institutions having no greater legal rights in the matter of note issue than any other company or citizen of the Commonwealth. There is a limitation of issue in most instances where the privilege is conferred by law, but the range allowed is so great that few banks would be able, even if they were desirous, to utilise their power of note issue to its full extent. For the privilege of issuing notes, the State charge what is called a composition at the rate of 2 per cent. per annum, and from this source the following revenues were received during the ten years ended 30th June, 1906:—

Year.	Amount.	Year.	Amount.
	£		£
1897	23,840	1902	29,861
1898	23,979	1903	28,743
1899	24,828	1904	27,673
1900	26,041	1905	26,640
1901	28,095	1906	27,976

The law does not require any special reserve to be maintained against bank-notes, but the issue is many times covered by the reserves; thus in June, 1906, the total note issue for banks, excluding the Queensland Treasury notes, amounted to £1,461,640, while the gold reserve and till money at the same period was £8,356,772. The lowest value for which notes are issued is £1, and the bulk of the issue is of this denomination.

The note circulation of banking companies has been declining, not only as compared with the population, but in actual volume. In 1885 there was an average of £1,793,686, representing about £1 18s. 8d. per inhabitant; while in 1901 the total had fallen to £1,498,035, and the average per inhabitant to £1 1s. 11d.; and in June, 1906, the issue had fallen to £1,461,640, and the average per head of population to 19s. 6d. In 1860 the note circulation was as much as £2 17s. 5d. per head, and in 1882, £2 1s. 10d. The following is a statement of the average note issue and bills in circulation at intervals since 1860:—

Year.	Notes in Circulation.	Bills in Circulation.	Total.	Average per Inhabitant.
	£	£	£	£
1860	949,849	62,505	1,012,354	2·95
1865	729,076	67,875	796,951	1·99
1870	695,366	50,515	745,881	1·52
1875	1,114,411	37,008	1,151,419	1·97
1880	1,260,772	51,698	1,312,470	1·80
1885	1,793,686	59,327	1,853,013	2·00
1890	1,557,805	127,442	1,685,247	1·53
1891	1,674,049	146,202	1,820,251	1·57
1892	1,439,872	104,223	1,544,095	1·30
1893	1,804,531	75,086	1,879,617	1·55
1894	1,235,989	146,911	1,382,900	1·12
1895	1,223,864	117,327	1,341,191	1·06
1896	1,237,971	111,889	1,349,860	1·06
1897	1,227,964	112,113	1,340,077	1·03
1898	1,278,940	125,414	1,404,354	1·06
1899	1,340,557	202,468	1,543,025	1·15
1900	1,447,641	209,905	1,657,546	1·21
1901	1,499,937	218,943	1,718,880	1·25
1902	1,454,415	208,521	1,662,936	1·18
1903	1,378,642	228,059	1,606,701	1·12
1904	1,345,934	196,995	1,542,929	1·06
1905	1,430,335	218,555	1,648,890	1·11
1906	1,461,640	244,059	1,705,699	1·14

During the operation of the Bank Notes Act of 1893, under which the issues of certain banks (twelve in number) were a first charge on their assets, and were legal tender throughout the State at all places except the head offices of the banks issuing, there was a special tax of 2½ per cent. on the average monthly issue. This tax was in substitution of the stamp duty of 2 per cent., and ceased with the lapse of the Act in October, 1895.

Under the "Current Account Depositors Act," passed on the 26th May, 1893, Treasury notes were authorised to be issued to relieve the depositors in the suspended banks, and were made legal tender throughout New South Wales. The amount authorised was £2,000,000, but only £358,500 was actually issued, and in terms of the Act, the amount withdrawn and cancelled during the period of six years fixed by the Act, in which the notes would be honored, was £358,390 10s., leaving a balance of £109 10s., which liability was transferred to the Consolidated Revenue in 1898-9.

INSURANCE.

There are no Acts of the New South Wales Parliament regulating the business of fire, life, and other forms of insurance, and local companies engaged in the business are either incorporated under special Acts or under the Companies Act. As the law does not require the publication of returns of the business transacted within the State, it is not customary for companies to disclose this information. The only figures available, therefore, are those relating to their whole business; but the cases are few in which a statement of the whole business of a company throws light on its operations in New South Wales. The inconvenience arising out of the state of the law in regard to insurance has been the subject of complaint by all companies seeking to transact business on sound lines, especially those companies engaged in life insurance. No deposit or other guarantee of genuineness is required, and it is open to anyone to start a life office, the business transacted being only limited by the extent to which the credulity of the public may be abused. The evils in regard to fire companies are not so great as for life companies, as the risks taken are almost invariably for short periods; but they are sufficiently great to call for speedy remedy.

There were eighty-seven companies operating in the State during 1905; of these, only thirteen were local institutions. In addition to those, there were two Underwriters' Associations, which do not, however, take any risks. The number doing each class of business was as follows:—

Class of Business.	Head Office.				Paid-up Capital.
	In New South Wales.	In other Commonwealth States.	Outside Commonwealth.	Total.	
	No.	No.	No.	No.	£
Life only	6	4	4	14	....
Fire only	3	1	8	12	1,225,200
Marine only	..	..	22	22	2,329 875
Fire and Life	..	..	10	10	3,515,138
Fire and Marine	2	2	6	10	953,126
Fire and Accident	..	..	2	2	327,497
Fire, Life, and Accident	..	..	2	2	429,006
Fire, Life, Marine, and Accident	..	..	1	1	250,000
Fire, Life, and Marine	..	..	1	1	448,275
Fire, Marine, and Guarantee	..	..	1	1	75,000
Fire, Life, Marine, and Guarantee	..	1	..	1	125,000
Fire, Life, Accident, and Burglary	..	..	1	1	1,000,000
Fire, Marine, Accident, Guarantee, Employers' Liability, and Plate Glass	..	1	..	1	100,000
Fire, Life, Accident, Guarantee, Employers' Liability, and Burglary	..	..	1	1	118,985
Fire, Accident, Employers' Liability, and Plate Glass	..	..	1	1	110,000
Fire, Life, Marine, Guarantee, Accident, Employers' Liability, and Burglary	..	..	1	1	689,220
Accident, Guarantee, Burglary, and Plate Glass	..	..	1	1	62,500
Accident, Disease, Employers' Liability, Guarantee, Burglary, and Plate Glass	..	..	2	2	155,646
Life, Accident, and Medical Benefit	1	..	..	1	4,721
Life, and Medical Benefit	1	..	1	2	5,250

The life assurance effected by the "Fire and Life" offices forms a very small proportion of their total business. Under the heading of "Life only" are included some companies which also have Industrial Departments, with capital liabilities to shareholders amounting to £41,727.

LIFE ASSURANCE.

Life assurance, in common with other forms of financial business, received a severe blow during the crisis of 1893, from the effects of which it is only now recovering. Prior to the year named all forms of life business showed great expansion; during 1894 and 1895 this gave place to a struggle to maintain the position already acquired; but since 1896 a decided improvement in business has been experienced. The falling-off after the financial crisis was not to be wondered at. The sudden stoppage of credit by the locking-up of deposits in banks drove many of the policy-holders to borrow on the security of their policies, and borrowing was too frequently the first step towards the surrender of the policy on the security of which the advance was made. The business of the last half of 1893 and of the whole of 1894 was in every respect abnormal; for during that period, taking the whole of the companies together, the surrenders and forfeitures actually exceeded the new business obtained. In dealing with the contraction in insurance business, it should be borne in mind that a good many of the old policies are now falling in, and at the same time the field from which new policies are obtained is sensibly narrowing, as the Australian States have been thoroughly exploited for many years, while the insurable element of four and three-quarter million people cannot be said to be large. Of late years, however, sundry new forms of insurance have been adopted, and the companies hope in this way more readily to attract the public now that a revival seems to have set in.

Special laws regulating the business of life assurance are in existence in every State except New South Wales; but they are by no means uniform, no two States having precisely the same law. During 1862 an Act was passed in New South Wales to encourage and protect life insurance, but its provisions in no way apply to the regulation of business.

On account of the absence of official returns, the particulars relating to the institutions are obtained from the reports published and circulated by the companies themselves; but, unfortunately, such statements do not allow of the business transacted locally being separated from that done elsewhere. During 1905 there were nineteen institutions operating in the State. Of these eight were local, five had their head offices in Victoria, one in New Zealand, one in the United Kingdom, one in Canada, and three in the United States. The volume of the local business of those last mentioned, proportionately to the total, is, however, so small that returns relating to the American offices have been omitted from the following comparisons, except where their local business can be stated. Eighteen companies, uniting life with other classes of insurance, have local branches or agencies, but with two exceptions their transactions in life risks in the State are unimportant.

Of the fourteen Australasian institutions, the Australian Mutual Provident Society and the Mutual Life Association of Australasia were incorporated under special Acts; and the City Mutual Life Assurance Society (Limited), the Citizens' Life Assurance Company (Limited), the Standard Life Association (Limited), the People's Prudential Assurance Company (Limited), and the Phœnix Mutual Provident Society (Limited), were registered under the Companies Act, the first-named in 1879, the Citizens' Life Assurance Company (Limited) in 1886, the Standard Life Association (Limited) in 1899, The People's Prudential Assurance Company (Limited) in 1896, and the Phœnix

Mutual Provident Society (Limited) in 1902. Of the remaining institutions five were incorporated in Victoria, one in Queensland, and one in New Zealand.

The results of the latest published actuarial investigations of the various societies were as follows:—

Institution.	Year when established.	Rate of Interest assumed in Valuation.	Date.	Net or present Liability.	Surplus.
Head Office in New South Wales—		Per cent.		£	£
Australian Mutual Provident Society	1849	3, 3½, 4 (*a*)	Dec., 1905	20,706,805	713,369
Mutual Life Association of Australasia	1869	3, 3½ (*q*)	Dec., 1904	1,728,398	140,376
City Mutual Life Assurance Society (Limited)	1879	4 (*t*)	Dec., 1903	247,876	6,837
Citizens' Life Assurance Company (Limited)	1886	Ord. 3 (*a*) Ind. 3½, 4 (*q*)	Dec., 1905 Dec., 1901	1,007,928 275,614	50,645 3,233
The Standard Life Association (Ltd.)	1899	Ord. 4 (*q*) Ind. 3½ (*q*)	June, 1904	9,164 6,326	546 144
Australian Metropolitan Life Assurance Company (Limited)	1895	Ord. 3½ (*q*) Ind. 3½, 4 (*q*)	Aug., 1902	5,826 12,972	*4,010
People's Prudential Assurance Company (Limited)	1896	Ord. 3½ (*t*) Ind. 3½ (*t*)	Aug., 1904	1,396 4,892	1,500
Phœnix Mutual Provident Society (Limited)	1902	Ind. †	†	†	†
Head Office in Victoria—					
Australian Alliance Assurance Company	1862	3½ (*t*)	Dec., 1903	230,567	5,389
National Mutual Life Association of Australasia (Limited)	1869	3½ (*t*)	Sept., 1904	3,671,160	261,207
Australian Widows' Fund Life Assurance Society (Limited)	1871	3½ (*q*)	Oct., 1901	1,418,509	100,049
Colonial Mutual Life Assurance Society (Limited)	1874	3½ (*q*)	Dec., 1904	2,568,145	261,541
Australasian Temperance and General Mutual Life Assurance Society (Limited)	1876	Ord. 3 (*q*) Ind. 3 (*q*)	Sept., 1905	358,802 101,012	18,745 3,358
Head Office in New Zealand—					
Provident Life Assurance Company	1889	Ind. 4 (*q*)	June, 1899	7,211	‡3,595
Head Office in Canada—					
Independent Order of Foresters	1877	4 (*q*)	Dec., 1902	10,989,712	§9,774,443
Head Office in United Kingdom—					
Liverpool, London, and Globe Insurance Company	1836	3 (*q*)	,, 1898	4,891,268	†
Head Office in United States, America—					
Equitable Life Assurance Society of United States	1859	3, 3½, 4 (*a*)	,, 1905	70,826,894	12,773,375
Mutual Life Insurance Company of New York	1843	3½, 4 (*a*)	,, 1905	79,532,351	16,082,936
New York Life Insurance Company	1845	3, 4 (*a*)	,, 1905	77,074,364	10,857,007

(*a*) Annual. (*t*) Triennial. (*q*) Quinquennial.
* Deficiency—New Business Extension Account. † No information available. ‡ Deficiency.
§ Apparent deficiency assuming that every policy-holder would be persistent until death at the rates in force without any increase or extra call whatever.

The net or present liability represents the present value of the sums assured in respect of whole life and endowment assurance, reversionary bonuses, endowments, and annuities in force at date of valuations, less the present value of the future pure premiums thereon.

Eleven of the companies are mutual, and the remainder are what is termed, in insurance parlance, "mixed"—that is, proprietary companies dividing profits with the policy-holders; while eight of the institutions, including the Australian Mutual Provident Society, also transact industrial business, and one company, the Australian Alliance Assurance Company, conducts fire, marine, and guarantee insurance, and the Liverpool, London, and Globe, fire insurance. Most of the offices have representatives in all the Commonwealth States and New Zealand, and three institutions have extended their operations to London, and two also to South Africa.

The following table gives the policies in force and the sums assured in the ordinary branch of each society at the close of 1905; the item "Sums assured" means the sums payable, exclusive of reversionary bonuses, at death, or on attaining a certain age, or at death before that age:—

Institution.	Policies in force, exclusive of Annuities.	Sums Assured, exclusive of Bonuses and Annuities.	Bonus Additions.	Total, inclusive of Bonuses.	Annual Premium Income.
	No.	£	£	£	£
Australian Mutual Provident Society	196,933	55,469,521	11,264,992	66,734,513	1,820,418
Mutual Life Association of Australasia	25,874	6,392,746	369,575	6,762,321	227,538
City Mutual Life Assurance Society (Ltd.)	12,011	1,499,842	55,100	1,554,942	59,886
Citizens' Life Assurance Company (Ltd.)	41,449	5,790,662	246,589	6,037,251	222,198
The Standard Life Association (Ltd.)*	2,552	......	......	12,437	......
Australian Metropolitan Life Assurance Company (Ltd.) †	1,399	119,810	902	120,712	5,679
People's Prudential Assurance Company (Ltd.)	801	44,997	301	45,298	2,285
Australian Alliance Assurance Company	823	290,108	26,948	317,056	8,526
National Mutual Life Association of Australasia (Ltd.)	66,833	15,943,893	1,232,043	17,175,936	531,673
Australian Widows' Fund Life Assurance Society (Ltd.)‡	24,607	5,178,803	238,634	5,412,437	187,454
Colonial Mutual Life Assurance Society (Ltd.)	36,941	10,864,947	381,660	11,246,607	353,112
Australasian Temperance and General Mutual Life Assurance Society (Ltd.) §	16,007	1,971,642	23,670	1,995,312	78,042
Independent Order of Foresters ‖	2,100	331,200	....	331,200	6,757
Liverpool, London, and Globe Insurance Company	904	¶373,558	**	373,558	9,981
Equitable Life Assurance Society of the United States ††	16,210	5,820,594	**	5,820,594	230,000
Mutual Life Assurance Company of New York ††	6,080	2,414,307	**	2,414,307	95,820
New York Life Insurance Company ††	8,942	3,425,005	**	3,425,005	139,415

* 30th June, 1905. † 31st August, 1905. ‡ 31st October, 1905. § 30th September, 1905.
‖ 31st December, 1904. ¶ 31st December, 1902. ** Not available. †† Australasian business only.

The whole of the business transacted by the Phœnix Mutual Provident Society (Limited), and the Provident Life Assurance Company, is industrial.

The following table shows the business in force at the close of the year immediately preceding that of the crisis, the year following the crisis, and at the close of 1905. As was to be expected, the volume of assurances decreased in nearly every society from 1892 to 1894, and the results as disclosed by the figures afford another striking instance of the widespread distress following the events of 1893. During 1898, however, most of the societies exhibited a considerable improvement in their business. The Mutual

Assurance Society of Victoria (Limited) was amalgamated with the National Mutual Life Association of Australasia (Limited) from 1st January, 1897.

Institution.	Amount Assured, excluding Bonuses and Annuities.		
	1892.	1894.	1905.
	£	£	£
Australian Mutual Provident Society	38,888,283	39,510,130	55,469,521
Mutual Life Association of Australasia	4,430,669	4,166,359	6,392,746
City Mutual Life Assurance Society (Ltd.)	719,999	776,946	1,499,842
Citizens' Life Assurance Company (Ltd.)	429,084	845,984	5,790,662
The Standard Life Association (Ltd.)	....	....	....
Australian Metropolitan Life Assurance Company (Ltd.)	....	....	119,810
People's Prudential Assurance Company (Ltd.)	....	....	44,997
Australian Alliance Assurance Company	769,987	645,463	290,108
National Mutual Life Association of Victoria (Ltd.)	6,479,001	6,338,659	15,943,893
Mutual Assurance Society of Victoria (Ltd.)	3,665,517	3,332,312	....
Australian Widows' Fund Life Assurance Society (Ltd.)	4,939,075	4,555,968	5,173,803
Colonial Mutual Life Assurance Society (Ltd.)	10,827,028	10,533,271	10,864,947
Australasian Temperance and General Mutual Life Assurance Society (Ltd.)	827,566	812,370	1,971,642
Independent Order of Foresters	....	....	331,200
Liverpool, London, and Globe Insurance Company	....	....	†373,558
* Equitable Life Assurance Society of the United States	4,335,522	4,211,667	5,820,594
* Mutual Life Assurance Company of New York	1,107,258	1,253,462	2,414,307
* New York Life Insurance Company	1,883,765	1,665,068	3,425,005

* Australasian business only. † 31st December, 1902.

The following table gives a summary of the new business completed during the past ten years by the twelve Australian offices represented in New South Wales. The assurance and endowment policies only are dealt with, as the annuity transactions are unimportant:—

Year.	Policies.	Amount Assured.		Annual Premiums.	
		Total.	Per Policy.	Total.	Per £100 of Assurance.
	No.	£	£	£	£ s. d.
1896	29,611	6,895,567	233	230,896	3 7 0
1897	30,761	6,974,149	227	240,962	3 9 1
1898	35,675	8,479,842	238	289,686	3 8 4
1899	39,434	9,039,315	229	294,476	3 5 2
1900	42,855	9,237,454	216	321,172	3 9 6
1901	43,004	9,069,130	211	328,086	3 12 4
1902	43,865	9,164,636	209	334,627	3 13 0
1903	44,504	9,624,405	216	349,410	3 12 7
1904	48,308	10,238,366	212	372,133	3 12 8
1905	49,736	10,731,768	216	398,565	3 14 3

It will be noticed that the average sum assured was £216 in 1905, compared with £233 in 1896, while the annual premium for £100 was considerably larger than for any of the other years shown. It would seem from these two facts that the depression of the past ten years has had the effect of curtailing the insuring powers of the people; while the proportionate increase in the premium is accounted for by the growth of the endowment-assurance business. At the present time about 45 per cent. of the total assurance business is of this description, and it is evident that the combination of investment with insurance thus afforded has obtained a strong hold on the assuring public. The average sum assured per endowment policy is below that of the whole-life policies, while the average annual premium is higher; as many of the policies are for short terms. The new assurances effected during the year, less the void business or discontinuances, represent the annual additions to the sums assured; this, or its opposite, is shown in the following comparison for the ten years ended 1905 :—

Year.	New Assurances.	Void Business.	Net yearly increase to sums assured.
	£	£	£
1896	6,895,567	5,501,385	1,394,182
1897	6,974,149	5,344,764	1,629,385
1898	8,479,842	5,328,957	3,150,885
1899	9,039,315	5,053,752	3,985,563
1900	9,237,454	5,673,224	3,564,230
1901	9,069,130	5,712,665	3,356,465
1902	9,164,636	5,804,255	3,360,381
1903	9,624,405	6,007,494	3,616,911
1904	10,238,366	6,364,307	3,874,059
1905	10,731,768	7,139,977	3,591,791

The receipts of the societies are chiefly represented by the collections from premiums on policies and the interest arising from investments of the accumulated funds; while payments on account of policies matured and surrendered, cash bonuses, and expenses of management chiefly comprise the disbursements. The receipts and disbursements of each society during 1905 were as follows :—

Institution.	Receipts.	Expenditure.	Excess Receipts (Addition to Funds).
	£	£	£
Australian Mutual Provident Society	2,794,231	1,938,284	855,947
Mutual Life Association of Australasia	314,649	224,048	90,601
City Mutual Life Assurance Society (Ltd.)	70,669	45,528	25,141
Citizens' Life Assurance Company (Ltd.)	255,129	119,079	136,050
The Standard Life Association (Ltd.)	10,223	6,757	3,466
*Australian Metropolitan Life Assurance Company (Ltd.)	24,606	22,187	2,419
*People's Prudential Assurance Company (Ltd.)	13,956	†13,548	408
Australian Alliance Assurance Company	18,056	33,368	(—)15,312
National Mutual Life Association of Australasia (Ltd.)	762,907	499,424	263,483
Australian Widows' Fund Life Assurance Society (Ltd.)	259,865	221,116	38,749
Colonial Mutual Life Assurance Society (Ltd.)	461,663	391,340	70,323
Australasian Temperance and General Mutual Life Assurance Society (Ltd.)	89,738	54,965	34,773
Total £	5,075,692	3,569,644	1,506,048

* Includes the Industrial Branch. † Includes payments to medical profession and chemists. (—) Denotes decrease.

With regard to the Australian Alliance Assurance Company, it should be mentioned that the decrease in the funds is largely due to the fact that hardly any new business has been transacted of late, and consequently the receipts have diminished, while the payments for claims and surrenders have increased. This feature will be accentuated as the company grows older, unless fresh policies are received, as the claims will naturally increase each year.

The aggregate receipts and disbursements, under the accepted heads, for the twelve institutions were as follow, but it should be pointed out that in the case of The Australian Metropolitan Life Assurance Company (Limited), and the People's Prudential Assurance Company (Limited), the industrial business is included, as a separation cannot be effected :—

Receipts.		Expenditure.	
	£		£
Premiums—		Claims	2,140,370
New	388,656	Surrenders	491,785
Renewal	3,098,240	Annuities	69,927
Consideration for Annuities	77,032	Cash Bonuses and Dividends	78,399
Interest	1,503,457	Expenses	696,478
Other Receipts (Rents, etc.)	8,307	Amount written off to Depreciation, Reserves, etc.	92,685
Total £	5,075,692	Total £	3,569,644

In 1894, for the first time for many years, the amount of interest earned and rents received were insufficient to meet the demands under the head of claims, and similar conditions prevailed during the following six years; the excess to be made good from the other sources, however, was small.

The yearly additions to the accumulated funds are largely dependent on the volume of assurances current, and any changes in the one are reflected in the figures of the other; it is, therefore, not surprising that coincident with the shrinkage in the volume of assurances in force up to the year 1894, the amount added to the accumulated funds had correspondingly fallen off. During the years 1895 to 1904, however, the additions to the funds have shown a considerable increase. The amount of funds and the interest received thereon, for the ten years ended with 1905, were as follow :—

Year.	Accumulated Funds.		Interest.	
	Additions during year.	Total Amount.	Amount received.	Average Rate realised.
	£	£	£	per cent.
1896	996,045	21,294,931	1,038,993	5·00
1897	1,191,032	22,485,963	1,047,560	4·78
1898	1,168,746	23,654,709	1,093,621	4·74
1899	1,476,215	25,130,924	1,119,525	4·59
1900	1,445,073	26,491,025	1,161,696	4·51
1901	1,441,288	27,932,313	1,224,120	4·50
1902	1,559,462	29,491,775	1,287,372	4·48
1903	1,586,315	31,088,090	1,360,292	4·49
1904	1,673,906	33,264,382	1,453,698	4·52
1905	1,603,317	34,915,842	1,527,690	4·48

The figures for 1899 include the business of the Standard Life Association (Limited) to 30th June, 1900. The total amount of accumulated funds for 1900 is exclusive of £99,332, the Investment Fluctuation Fund of the Colonial Mutual Life Assurance Society (Limited), which sum was included in previous years. It, however, includes £14,360, the amount of the funds of the Australian Metropolitan Life Assurance Company (Limited) at the 31st of August, 1899, which was not included in the total given for the previous year. The figures for 1904 and 1905 include the funds of the industrial branches and other funds, which were not taken into account in previous years.

ASSETS AND LIABILITIES OF THE ORDINARY BRANCH OF ASSURANCE COMPANIES.

The societies establish annually a statement of their liabilities and assets, with the object of showing the distribution of the accumulated funds and the amount placed to commercial reserve. The returns are, however, in no way connected with the valuation balance-sheets prepared at the date of the actuarial investigation. The assets and liabilities of each institution, for the financial year 1905, in respect of ordinary business, are shown in the subjoined table :—

Institution.	Assets.			Liabilities.		
	Loans on Mortgages and Policies.	Government and Municipal Securities, Freehold Property, Cash on Deposit, etc., etc.	Total.	Total Funds, including Paid-up Capital.	Other Liabilities.	Total.
	£	£	£	£	£	£
†Australian Mutual Provident Society	13,992,531	7,852,018	21,844,549	21,423,081	421,468	21,844,549
Mutual Life Association of Australasia ..	1,191,625	785,929	1,977,554	1,959,375	18,179	1,977,554
City Mutual Life Assurance Society (Ltd.)	141,051	161,280	302,331	300,049	2,282	302,331
*Citizens' Life Assurance Company (Ltd.)	451,249	614,730	1,065,979	1,058,573	7,406	1,065,979
*Standard Life Association (Ltd.)	439	13,279	13,718	13,175	543	13,718
†Australian Metropolitan Life Association Company (Ltd.).....................	718	38,816	39,534	28,827	10,707	39,534
†People's Prudential Assurance Company (Ltd.)	7,083	6,105	13,188	8,196	4,992	13,188
‡Australian Alliance Assurance Company..	238,428	205,344	443,772	209,814	233,958	443,772
National Mutual Life Association of Australasia (Ltd.)........................	2,799,106	1,599,896	4,399,002	4,195,850	203,152	4,399,002
Australian Widows' Fund Life Assurance Society (Ltd.)...................	1,233,945	513,200	1,747,145	1,723,832	23,313	1,747,145
Colonial Mutual Life Assurance Society (Ltd.)	1,615,534	1,379,134	2,994,668	2,990,533	4,135	2,994,668
†Australasian Temperance and General Mutual Life Assurance Society (Ltd.)..	161,851	323,134	484,985	481,918	3,067	484,985
Total ....£	21,833,560	13,492,865	35,326,425	34,393,223	933,202	35,326,425

*** Ordinary Branch only. † Includes Industrial Branch. ‡ Includes Fire, Marine, and Guarantee Branches, which cannot be separated.**

About 46 per cent. of the total assets are represented by loans on mortgage, and another 16 per cent. is lent on the policies of the societies. In former years insurance companies were almost confined to these forms of investment, but recently more attention has been given to Government securities, loans to municipalities, and investments in shares; while considerable sums are deposited with the banks, or sunk in freehold and leasehold property. The remaining items require no special comment, except loans on personal security. Investments of this character are unusual in Australasia, the amount invested aggregating only £49,407. In some of the States the companies are obliged by law to deposit certain sums with the Treasury as a guarantee of good faith, and the amount so lodged is included either under the head of Government securities or of deposits.

EXPENSES OF MANAGEMENT OF ASSURANCE COMPANIES.

The ratio of expenses of management to premium income and gross receipts must necessarily vary according to the age of the society and the proportion of new business transacted. The figures are given for what they are worth. That a more exact comparison cannot be made is the fault of certain companies which fail to make a complete disclosure of their affairs, and do not distribute their expenses of management so that the cost of new business may be distinguished from that of old business; the reports of other companies are unequalled in any part of the world:—

Institution.	Expenses of Management.		
	Amount.	Proportion to—	
		Premium Income.	Gross Receipts.
	£	per cent.	per cent.
Australian Mutual Provident Society	246,676	13·42	8·88
Mutual Life Association of Australasia	62,200	26·90	19·77
City Mutual Life Assurance Society (Ltd.)	15,615	28·00	22·10
Citizens' Life Assurance Company (Ltd.)	33,545	15·83	13·15
The Standard Life Association (Ltd.)	5,599	57·14	54·77
* Australian Metropolitan Life Association Company (Ltd.)	16,457	71·66	66·88
* People's Prudential Assurance Company (Ltd.)	6,809	50·58	48·79
Australian Alliance Assurance Company	2,852	21·65	15·80
National Mutual Life Association of Australasia (Ltd.)	137,209	24·14	17·99
Australian Widows' Fund Life Assurance Society (Ltd.)	50,826	27·77	19·56
Colonial Mutual Life Assurance Society (Ltd.)	99,796	28·80	21·62
Australasian Temperance and General Mutual Life Assurance Society (Ltd.)	18,894	25·73	21·05

* Includes Industrial Branch.

ASSURANCE IN VARIOUS COUNTRIES.

The average amount assured per policy for each State, and for New Zealand, the United Kingdom, Canada, and the United States, is given in the following table. The figures relate to the ordinary branch only, and in some instances are probably somewhat overstated, as all the companies do not show complete returns of the business in each State, but the results may be taken as a fair estimate for each province. The Australasian business of the American institutions, excluded from the previous returns, has been included for the purpose of establishing the Australian averages shown herewith:—

Country.	Average sum assured per Policy.	Average Premium per £100 of Assurance.
	£	£ s. d.
Commonwealth of Australia	252	3 1 7
New South Wales	268	3 1 11
Victoria	238	3 2 4
Queensland	287	2 19 5
South Australia	236	3 4 10
Western Australia	288	3 0 9
Tasmania	251	3 3 10
New Zealand	243	3 1 2
United Kingdom	306	....
United States	386	....
Canada	323	....

The average amount of assurance per head of population was, in Australasia, £24; in Canada, £21; in the United Kingdom, £16; and in the United States, £26; while the average number of policies per thousand of population was, in Australasia, 93; in Canada, 63; in the United Kingdom, 51; and in the United States, 66.

The average policy is scarcely a fair measure of thrift. In these States mutual assurance is the rule, and members of the various societies have acquired large bonus additions. The average existing policy, including reversionary bonus, of the Australasian companies during 1905 was £288, as compared with the £252 shown in the comparative table.

It would seem that the practice of assuring life is much more prevalent in Australasia than in any of the other countries instanced; and although the average sum assured by each policy is less, the number of policies is so much greater, as compared with the population, that the amount assured per inhabitant is considerably higher.

INDUSTRIAL ASSURANCE.

In addition to the ordinary life transactions mentioned in the foregoing tables, a large industrial business has grown up during the past few years. The policies in this class are usually for small amounts, and the premiums are, in most cases, payable weekly or monthly. The assurances may be effected on the lives of infants and adults, and the introduction of this class of business has proved of great benefit to the industrial population.

Perhaps the most important departure in respect of this method of life assurance is that adopted by the Australian Mutual Provident Society. The downward tendency in the average sum assured in the ordinary branch, which has not only been constant for many years, but presents the appearance of being intensified in the future, and the fact that under the conditions of Commonwealth and State employment, policies for as low a sum as £50 have been issued, forced recognition that the society was already engaged in industrial business, without the machinery necessary to carry it out effectively. The splendid organisation, in the way of branch and district offices spread over Australasia, provided the society with the means of undertaking this class of business without the necessity for that costly initial expenditure which accompanies the establishment of offices transacting purely industrial business. The industrial department of the society was accordingly inaugurated on the 1st January, 1905.

As already mentioned, there are six of the Australasian companies previously dealt with which combine industrial with ordinary business, while two limit their operations to industrial and medical benefit transactions. The balance-sheets of these companies, however, do not show sufficient information to admit of making a satisfactory comparison of the business transacted, as in some cases the two branches are not treated separately. At the close of 1905 the business in force of the eight companies showing transactions in the industrial branch, was as follows:—

Company.	Date.	No. of Policies.	Sum Assured.	Annual Premiums.
			£	£
Australian Mutual Provident Society	Dec., 1905	8,114	207,027	12,095
Citizens' Life Assurance Company (Ltd.) ...	„ 1905	194,593	3,955,597	178,841
The Standard Life Association (Ltd.)	June, 1905	17,611	514,136	25,469
Australian Metropolitan Life Assurance Company (Ltd.).............................	Aug., 1905	10,377	293,715	14,818
People's Prudential Assurance Company (Ltd.)..	„ 1905	4,674	109,118	6,208
Phœnix Mutual Provident Society...........	Dec., 1905	386	25,019	1,200
Australasian Temperance and General Mutual Life Assurance Society (Ltd.)..	Sept., 1905	87,783	1,694,153	109,732
Provident Life Assurance Company	Dec., 1905	13,672	391,117	17,842
Total..................................	....	337,210	7,189,882	366,205

It will thus be seen that the average amount per policy for these companies was about £21 6s. 5d., while the average premium per policy amounted to £1 1s. 9d. per annum, or about 5d. per week.

The receipts and disbursements of the companies publishing the information are given below, the dates to which the figures relate being also shown :—

Company.	Date.	Receipts.			Disbursements.			
		Premiums.	Other.	Total.	Claims, Surrenders, and Cash Dividends.	Expenses of Management, Commission on New Business, &c.	Other.	Total.
		£	£	£	£	£	£	£
Australian Mutual Provident Society	Dec., 1905..	6,123	*12,000	18,123	124	19,069	..	19,193
Citizens' Life Assurance Company (Ltd.)	Dec., 1905..	179,629	19,797	199,426	53,095	82,039	8,577	143,711
Standard Life Association (Ltd.)	June, 1905..	22,866	580	23,446	1,686	16,787	38	18,511
Phœnix Mutual Provident Society (Ltd.)	June, 1906..	1,539	37	1,576	300	709	†486	1,495
Australasian Temperance and General Mutual Life Assurance Society (Ltd.)	Sept., 1905..	99,558	3,941	103,499	14,218	54,761	..	68,974
Provident Life Assurance Company	Dec., 1905..	15,119	708	15,827	4,596	7,967	181	12,744
Total	....	324,834	37,063	361,897	74,014	181,332	9,282	264,628

* Transfer from Ordinary Branch. † Includes payments to medical practitioners and chemists.

The figures quoted show that nearly 90 per cent. of the total receipts consists of premiums, the other sources of revenue being interest, rent, fines, &c. With regard to the disbursements, it will be noticed that a large amount was paid for expenses of management, commission, &c., the proportions under this head being :—

	Percentage of Total Income.	Percentage of Premium Income.
Australian Mutual Provident Society..................	105·22	311·43
Citizens' Life Assurance Company (Ltd.)	41·14	45·67
Standard Life Association (Ltd.)	71·60	73·41
Phœnix Mutual Provident Society (Ltd.)	44·98	46·07
Australasian Temperance and General Mutual Life Assurance Society (Ltd.)	52·91	55·00
Provident Life Assurance Company....................	50·34	52·69

The expenses of all societies transacting this class of business are invariably high, as a large staff of collectors and agents have to be employed, who are required to call at the homes of the assured for payments, but it may be said generally that the above ratios compare not unfavourably with those of old-established societies in the United Kingdom and the United States of America.

On reference to page 567 it will be seen that in respect of the Australian Metropolitan Life Assurance Company (Limited), the People's Prudential Assurance Company (Limited), and the Australasian Temperance and General Mutual Life Assurance Society (Limited), the assets and liabilities of the industrial branch cannot be separated from those of the ordinary branch. In the following table is given the information for those companies which disclose the particulars in their balance-sheets :—

Institution.	Assets.			Liabilities.		
	Loans on Mortgages and Policies.	Securities, Freehold Property, &c.	Total.	Total funds including paid-up Capital.	Other Liabilities.	Total.
	£	£	£	£	£	£
Citizens' Life Assurance Company (Ltd.)..	232,927	248,884	481,811	479,799	2,012	481,811
Phœnix Mutual Provident Society (Ltd.)..	......	799	799	647	152	799
Provident Life Assurance Company	4,540	29,724	34,264	18,268	15,996	34,264
Standard Life Association (Ltd.)..........	1,034	23,029	24,063	23,905	158	24,063
Total......................	238,501	302,436	540,937	522,619	18,318	540,937

A distinctive feature of the liabilities of five of the companies (the Australian Mutual Provident Society and the Australasian Temperance and General are purely mutual) is the amount of share capital employed, and the profits generally provide for the payment of dividends to shareholders, the policy-holders, as a rule, not being entitled to participate. The paid-up capital at the latest available date was as follows :—

	£
Citizens' Life Assurance Company (Ltd.)	**20,000**
Standard Life Association (Ltd.)	**12,500**
Australian Metropolitan Life Assurance Company (Ltd.)	**9,227**
People's Prudential Assurance Company (Ltd.)	**4,782**
Provident Life Assurance Company	**5,250**

FIRE INSURANCE.

The amount of the net risks held in the metropolitan area is obtainable under the 22nd clause of the Fire Brigades Act of 1902, which requires each company holding risks within the proclaimed area under the Fire Brigades Board to furnish annually to the Board the amount held at risk on the preceding 31st December within that area, less the sum reinsured with other contributory companies under the Act. This information, however, is for assessment purposes only, the companies being obliged to contribute one-third of the total annual expenditure of the Board, the sum subscribed by each being proportionate to the amount of net risks held within the said area. The total amount levied on the companies towards the expenses of the Board during 1906 was £14,700, from 44 companies. The net risk in the metropolitan area held by each company on the 31st December, 1905, was as follows :—

Name of Company.	Net amount at risk on 31st Dec., 1905.	Name of Company.	Net amount at risk on 31st Dec., 1905.
	£		£
Aachen & Munich Fire Insurance Co.	1,256,430	National Union Society (Ltd.)	152,888
Alliance Assurance Company (Ltd.)	4,170,466	New Zealand Insurance Company	2,822,006
Atlas Assurance Company (Ltd.)	876,361	North British and Mercantile Insurance Company	1,166,537
Australian Alliance Assurance Company	698,161	North Queensland Insurance Company (Ltd.)	1,706,879
Australian Mutual Fire Insurance Society	9,357,119	Northern Assurance Company	912,249
Batavia Sea and Fire Insurance Company	173,800	Norwich Union Fire Office	3,031,753
Bombay Fire and Marine Insurance Co. (Ltd.)	66,893	Palatine Insurance Company (Ltd.)	650,844
Caledonian Insurance Company	554,630	Patriotic Assurance Company	330,858
Central Insurance Company	107,144	Phœnix Assurance Company (Ltd.)	1,259,657
City Mutual Fire Insurance Co. (Ltd.)	1,951,568	Royal Insurance Company	2,924,195
Colonial Mutual Fire Insurance Co. (Ltd.)	1,606,988	Royal Exchange Assurance Corporation	684,995
Commercial Union Assurance Co. (Ltd.)	7,026,203	Scottish Union and National Insurance Company	554,630
Commonwealth Insurance Company	22,200	South British Fire and Marine Insurance Company of N.Z.	2,236,100
Derwent and Tamar Fire and Marine Insurance Co.	281,638	Standard Fire and Marine Insurance Company of N.Z.	500,083
General Accident Assurance Corporation	341,234	State Fire Insurance Company (Ltd.) of Liverpool	345,540
Guardian Fire and Life Assurance Co. (Ltd.)	1,088,298	Sun Insurance Office of London	2,011,076
Lancashire Insurance Company	613,910	Union Assurance Society	805,104
Law Union and Crown Insurance Co.	85,690	United Insurance Company (Ltd.)	5,228,760
Liverpool and London and Globe Insurance Company	3,580,134	Victoria Insurance Company (Ltd.)	1,622,593
London and Lancashire Fire Insurance Company	1,803,834	Yorkshire Fire and Life Insurance Co.	461,991
London Assurance Corporation	748,771		
Manchester Assurance Company	764,257		
Mercantile Mutual Insurance Co. (Ltd.)	10,144,451		
National Fire and Marine Insurance Company of N.Z.	1,379,831	Total £	78,108,749

In cases where insurances cannot be effected in New South Wa
is an arrangement with the Fire Underwriters' Association by w
proportionate amount of the assessment due to the Fire Brigades
paid by the insured. No risks of this kind were in force at the close
or 1898, but at the end of 1896 the insurances on local properties he
side the State amounted to £200,260.

The declared amount of risks held in the metropolitan district since the Fire Brigades Act came into force was as undernoted. The figures refer to the 31st December in each year:—

1884 ...	£36,691,000	1892 ...	£61,185,715	1900 ...	£66,427,642
1885 ...	41,631,582	1893 ...	59,844,701	1901 ...	69,495,391
1886 ...	46,253,370	1894 ...	59,340,096	1902 ...	71,750,461
1887 ...	49,209,395	1895 ...	59,720,282	1903 ...	73,083,028
1888 ...	53,583,000	1896 ...	59,907,953	1904 ...	75,147,807
1889 ...	57,148,388	1897 ...	60,426,170	1905 ...	78,108,749
1890 ...	58,207,183	1898 ...	61,861,909		
1891 ...	58,415,945	1899 ...	63,689,331		

The number of fires which occurred in the metropolitan district during the year 1905 was 517, which may be classified as follows, according to the damage done:—

Slight damage	477
Serious damage	14
Total destruction	26

Besides these, there were 79 chimney fires, and 79 false alarms.

Of the premises totally destroyed, 17 were insured and 9 were not insured. Of those in which serious damage was effected, the whole were insured, while of those coming under the head of slightly damaged, 169 were insured, 256 not insured, and in 52 instances the insurance was unknown; so that it would appear the total number of insurances was 198, as against 319 non-insurances, or 44 per cent. of the whole number for which information is available. The percentage just given must be taken with qualification, as the premises and the property therein contained frequently belong to different persons, and in order to gauge the extent to which insurance is practised it would be necessary to ascertain in how many instances the double insurance was effected. In the returns above given a property is considered insured if the premises be covered and the contents uninsured, and the converse is also the case. It is remarkable how much more liable insured premises are to receive serious damage than those uninsured. This is a matter, however, belonging rather to the ethics of insurance than to statistics.

The following is a statement of the fires which occurred in the metropolitan area during the past ten years:—

Year.	Slight Damage.	Serious Damage.	Total Destruction.	Total Fires.
1896	230	27	34	291
1897	384	23	42	449
1898	372	19	31	422
1899	478	15	27	520
1900	357	13	28	398
1901	450	13	24	487
1902	448	5	29	482
1903	425	11	22	458
1904	474	10	29	513
1905	477	14	26	517

Under clause 20 of the Fire Brigades Act authority is given to extend its provisions to the country districts; but owing to an ambiguous clause in the statute the fire insurance companies do not consider themselves called upon to contribute anything towards the maintenance of the country Boards, hence many of the municipalities have not taken any steps to come under the Act further than being gazetted. The country districts are served by volunteer fire companies, a return of which will be found in the subjoined table. Full particulars, similar to those given for the metropolitan district, cannot be obtained, and until the Act is made operative outside Sydney and suburbs correct returns will not be available.

The total number of firemen attached to the brigades in the metropolitan and country districts, and the number of fires attended during 1905, were as stated below :—

Name of Station.	Number of— Actual fires attended.	Number of— Men in the Brigades.
Metropolitan Fire Brigade—		
No. 1, Head-quarters	517	36
No. 2, George-st. West		12
No. 3, George-st. North		12
No. 4, Darlinghurst		8
No. 5, Newtown		8
No. 6, North Sydney		8
No. 7, Marrickville		12
No. 8, Alexandria		6
No. 9, Woollahra		8
No. 10, Redfern		8
No. 11, Paddington		12
No. 12, Balmain		8
No. 13, Waterloo		6
No. 14, Randwick		4
Auxiliary Firemen		20
Metropolitan Volunteer Companies—		
Ashfield		10
Bexley		6
Botany		8
Burwood		10
Concord		10
Drummoyne		8
Glebe		10
Granville		9
Hurstville		8
Kogarah		7
Leichhardt		10
Liverpool		12
Manly		14
Mosman		8
North Botany		9
Parramatta		10
Penrith		10
Richmond		12
Rockdale		8
Rookwood		8
Waverley		13
Willoughby		8
Willoughby, East		6
Engine-keepers at various stations		23
Country Companies—		
Adamstown	4	16
Albury	7	23
Armidale	...	16
Ballina	1	13
Balranald	1	8
Bathurst	5	14
Bega	...	13
Berry	1	15
Boolaroo	4	9
Bourke	8	10
Bowral	6	20
Braidwood	2	15
Broadmeadow	2	14
Broken Hill	43	23
Camden	1	15
Campbelltown	...	...
Country Companies—*ctd.*		
Candelo	...	15
Carrington	5	21
Casino	...	15
Cobar	17	26
Condobolin	...	14
Coonamble	...	12
Cootamundra	2	18
Corowa	3	30
Deniliquin	...	...
Dubbo	2	14
Forbes	7	14
Gladesville	7	12
Glen Innes	2	16
Goulburn	7	24
Grafton	...	24
Grafton, South	...	...
Grenfell	2	28
Gunnedah	...	...
Hamilton	1	12
Hay	9	12
Hillgrove	3	37
Inverell	3	10
Islington	9	14
Jerilderie	...	10
Junee	4	15
Kempsey	...	...
Kiama	1	16
Kurri Kurri	2	25
Lambton	3	11
Lambton, New	2	11
Lismore	10	16
Lithgow	9	23
Liverpool	4	9
Maitland, East	5	18
Maitland, West	7	22
Merewether	3	10
Minmi	1	14
Moama	...	8
Moree	1	15
Morpeth	6	12
Moss Vale	4	16
Mudgee	...	22
Muswellbrook	...	15
Narrandera	2	15
Newcastle, City	10	14
Newcastle, Central	9	18
Newcastle, West	15	16
Nowra	...	16
Orange	4	11
Parkes	...	...
Plattsburg and Wallsend	5	19
Queanbeyan	1	26
Richmond	4	9
Singleton	3	20
Stockton	2	30
Tamworth	4	14
Taree	1	16
Temora	...	...
Tenterfield	...	6
Tighe's Hill	6	15

Name of Station.	Number of— Actual fires attended.	Number of— Men in the Brigades.	Name of Station.	Number of— Actual fires attended.	Number of— Men in the Brigades.
Country Companies—*ctd.*			Country Companies—*ctd.*		
Tumut	3	14	Wickham	6	13
Wagga Wagga	13	18	Wilcannia	...	...
Wallsend, West	4	20	Windsor	...	...
Waratah and Mayfield	3	12	Wollongong	2	16
Wellington	5	12	Yass	4	23
Wentworth	...	15	Young	...	...

FRIENDLY SOCIETIES.

The position occupied by Friendly Societies at the present day is a most important one, on account of the strong influence which they exert on the welfare of the industrial classes of the population; and recognising the services which they render to the community by the inculcation of habits of thrift, and the relief of cases of distress which it would otherwise be the duty of the public to alleviate, the State, while forbidding the carrying on of operations by an unregistered society, and imposing a penalty on each member of its committee should it accept money in consideration of any interest therein, grants certain privileges to societies whose rules have been certified to by the Registrar as being in conformity with the law. These privileges are as follow :—

1. A registered Society can legally hold land and other kinds of property in the names of trustees, such property passing from one trustee to another by the mere fact of appointment, and can carry on all legal proceedings in the trustees' names.
2. The Society has a remedy on summary conviction whenever any person—
    - (*a*) Obtains possession of its property by false representation or imposition;
    - (*b*) Having possession of any of its property, withholds or misapplies it;
    - (*c*) Wilfully applies any part of such property to purposes other than those expressed or directed by the rules and authorised by the Act.
3. If an officer of the Society dies or becomes bankrupt or insolvent, or if an execution is issued against him whilst he has money or property of the Society in his possession by virtue of his office, the trustees of the Society are entitled to claim such money or property in preference to any other creditors.
4. The documents of the Society are free from stamp duty.
5. The Society can admit members under twenty-one and take from them binding receipts, which would otherwise be of no effect.
6. If it invests money on mortgage, such mortgages can be discharged by a mere endorsed receipt without reconveyance.
7. Its officers are legally bound to render account and give up all money or property in their possession on demand or notice, and may be compelled to do so.
8. Disputes can be legally settled according to the Society's own rules.

9. Members of registered Friendly Societies have the privilege of legally insuring money, on the deaths of their wives and children, for their funeral expenses, without having an insurable interest in their lives.
10. Members of registered Societies may dispose at death of sums payable by the Society by written nomination without a will; and this nomination may be made by youths of sixteen, who cannot make a will till they are twenty-one.
11. Where there is no will and no nomination, the trustees may distribute sums without letters of administration being taken out. (A person who should do so in any other case would make himself liable for the debts of the deceased.)

Most of the Friendly Societies operating in New South Wales were founded by old members of English orders who had emigrated to Australia before the light of public investigation had been thrown upon the business of the societies in Great Britain, and an exposure made of the unscientific principles on which they were being conducted. Accordingly, the societies established in this State were from the commencement worked under a fallacious system, which was regarded as perfect; and as soon as it was discovered that there was an accumulation of funds, the members looked upon the money as their personal property—in fact, as profit derived from their exertions. They argued that any probable change from the existing satisfactory condition of affairs would be fully compensated for by the introduction of younger members, who in their turn would be satisfied with the present, and trust to others in the future; and any proposal for the application to their affairs of the scientific principles which governed the operations of friendly societies elsewhere was strenuously opposed as unnecessary, until very recently, when many leading members were induced, owing to the rapid depletion of the funds of their orders, to give serious consideration to their position.

One of the principal causes which raised this false feeling of security was that in times of general prosperity many employers paid good workmen their wages during short periods of sickness in order to retain their services, and members in receipt of high wages and in tolerably easy circumstances did not feel the necessity of accepting assistance from their lodges. Also, it must be borne in mind that in those years the members were young, and even if all claims had been preferred it is probable that the benefits would not have amounted to a large sum, so that the funds of the societies could not do otherwise than increase in spite of the inadequate scale of contributions charged. An examination of the records of the registration of amended rules shows what the accumulation of capital led to: in many cases the members of a society thought it right not only to lower their contributions, but at the same time to increase the benefits given. The inevitable results have happened: the members have grown older, the claims on account of sickness and death have increased, and the depression in trade has compelled those out of employment to come upon the funds whenever possible, so that many of the societies now existing are in a state of insolvency.

As has already been stated, when the fallacy underlying the old system of conducting the affairs of the societies had been so forcibly exploded, some attempt was made to place affairs on a sound basis, but the steps taken by many of the older members were halting and uncertain; they conceded that an error of judgment was committed in the past, but were unwilling to tax themselves to any considerable extent for the purpose of placing matters upon a better footing. At the same time they were convinced that no new members should be admitted unless they paid according to a properly-adjusted scale of contributions. It became, therefore, necessary for

Parliament to place the societies into a more satisfactory position by legislative action. This was done by the Act No. 31 of 1899, assented to on the 5th December of that year. The main points of the Act are:—

1. The recognition of the authority of the grand lodges over the subordinate branches.
2. The enlargement of the powers of the Registrar in the direction of the inspection of the lodge-books and the initiation of prosecutions in cases of defalcation.
3. The re-registration of all existing societies, and the power given to the Registrar to insist upon the adoption of an adequate scale of contributions before granting registration.
4. The provision for a quinquennial valuation, and the power to enforce the improvement of the scale of contributions, if this should be shown to be inadequate by the valuation.

This Act was amended in 1900, again in 1901, and again in 1906, the principal amendments being the extension of the period for registration to June, 1902, and provision that existing societies may be re-registered for five years conditionally upon members who join before the registration contributing not less than at present, and new members on an adequate scale to be certified to by an actuary. The further re-registration at the end of the period indicated will be contingent on the Registrar being satisfied that the society has improved its financial position in respect to the old members, or that the society has adopted an adequate scale of contributions. The Amendment Act of 1906 provides for the compulsory registration of all Friendly Societies within six months from the commencement of the Act.

The following table shows the progress in the number of societies, branches, and members, during the seven years ended 31st December, 1905:—

Year ended 31st December.	Branches.	Members.
	No.	No.
1899	758	78,245
1900	780	82,994
1901	863	89,684
1902	936	91,014
1903	1,023	94,044
1904	1,139	97,952
1905	1,195	101,463

The receipts and expenditure of the societies for the seven years ended 31st December, 1905, are set forth in the following statement:—

Year.	Receipts.				Expenditure.				
	Proposition, Initiation, Registration, Clearance Fees, and Contributions.	Interest.	Other Receipts.	Total.	Sick Pay and Funeral Benefits.	Medical Attendance and Medicine.	Management Expenses.	Other Expenditure.	Total.
	£	£	£	£	£	£	£	£	£
1899	234,409	17,125	15,405	266,939	86,707	61,576	63,016	20,996	232,295
1900	249,335	18,874	27,839	296,048	88,627	66,956	70,130	29,147	254,860
1901	271,256	21,803	24,473	317,532	102,179	71,255	75,577	29,898	278,909
1902	308,639	24,704	27,195	360,538	103,989	86,235	92,064	23,995	306,283
1903	244,666	26,794	35,102	306,562	97,697	78,858	38,216	24,658	239,429
1904	279,691	28,300	58,150	366,141	109,874	94,077	37,906	91,189	333,046
1905	294,842	34,325	61,299	390,466	113,845	98,990	40,765	60,892	314,492

The figures for years prior to 1903 include particulars respecting some societies which had been registered under the repealed Act, and which, although remaining unregistered under the existing law, were viewed as contemplating registration. These societies, however, have elected to remain as unregistered bodies. Furthermore, the figures for 1903 and subsequent years do not include the particulars of certain societies designed to meet the requirements of a few special groups of people in relation to mine accidents and other peculiar types of benefit, which are not in the same category as that of Friendly Societies proper.

The total cases of sickness came to 18,348, at a total cost of £83,375, or an average amount of sick pay of £4 10s. 11d. per member. The total receipts were £390,466, and the expenditure amounted to £314,492.

The total funds of the Friendly Societies at the end of 1905 amounted to £960,668, and were invested as follows :—

Classification	Sickness Fund.	Funeral Fund.	Medical and Management Fund.	Other Funds.	Total.
Invested—	£	£	£	£	£
Mortgage	160,614	148,375	7,778	5,903	322,670
Public Funds	15,065	49,673	872	91	65,701
With District or Grand Lodge..	25,943	......	1,155	49	27,147
Savings Banks	180,331	76,209	18,770	8,691	284,001
Other Banks	30,882	9,671	2,546	93	43,192
Purchase of Buildings	58,391	28,833	20,368	3,062	110,654
Other Freehold Property	27,184	2,069	1,875	969	32,097
Other Investments	14,580	2,177	2,094	1,874	20,725
Uninvested—					
Cash not bearing Interest	30,826	8,401	12,612	4,076	55,915
Illegally in use	7,537	4,183	156	491	12,367
Overdraft	(–) 1,404	(–) 9	(–) 11,718	(–) 670	(–) 13,801
Total	549,949	329,582	56,508	24,629	960,668

The benefits promised by Friendly Societies are, in kind, much the same in all societies, and usually comprise medical attendance and medicine for a member and his family, sick pay—generally £1 per week for the first six months, reduced thereafter to 15s. or 10s.; allowance in the event of the death of a member's wife, and funeral money to his wife on the death of a member. The Act limits the amount payable on the death of a member to £200, and no annuity can be granted above £50, but there is no limit to the amount of sick pay, although the rules of some societies limit the total amount receivable weekly to 42s., nor to the number of societies to which one person may belong, and from which he may receive benefits, but the combined benefits must not exceed the above-mentioned amounts.

In addition to the Friendly Societies properly so called, some of the registered Trade Unions give benefits analogous to those of the societies mentioned above. The benefits, however, are usually smaller in amount, seldom exceeding 12s. a week for sick pay, and £7 in case of death. A few Trade Unions also make allowances to their members when they are out of employment.

MONEY ORDERS AND POSTAL NOTES.

The money order and postal note systems are worked in conjunction with the Posts and Telegraph Department. Under the money order system, money may be transmitted from any part of New South Wales where an office is open to any part of the civilised world. The orders are sent either direct to the place of payment or through intermediary agencies, all places within New South Wales or the neighbouring States being dealt with direct, while to places outside Australia the intermediary system is applied. Under the postal note system exchanges are effected throughout the Commonwealth; but its original object was to afford means of transmitting amounts of £1 and under to places within the State. As regards small remittances within the State, the money order and postal note systems cover somewhat the same ground; but as the convenience both of sender and receiver is in favour of the postal note, it is anticipated that the money order system will be almost entirely confined to business of more than £1.

The money order system was adopted in January, 1863. In that year there were three orders issued for every 100 persons in the State, and the total value of the orders was £53,862; while in 1905 the number had risen to 39 per 100 inhabitants, and the total value to £2,076,146. The growth of the business has been mainly due to the extension of the sphere of operations, both locally and elsewhere, and to the greater appreciation of the system, especially by the wage-earning class of the community. Appended is a statement of the business transacted in 1905:—

Issued in New South Wales.			Drawn on New South Wales.		
Drawn on—	Number	Value.	Issued and paid in—	Number	Value.
Commonwealth of Australia—		£	Commonwealth of Australia—		£
New South Wales	480,306	1,746,866	New South Wales	459,246	1,757,229
Victoria	26,767	93,747	Victoria	13,437	57,699
Queensland	10,328	41,492	Queensland	19,658	76,642
South Australia	10,857	37,071	South Australia	5,954	24,108
Western Australia	3,311	18,009	Western Australia	17,262	72,749
Tasmania	2,615	10,196	Tasmania	7,107	26,332
New Zealand	6,461	20,332	New Zealand	34,544	78,474
United Kingdom and Europe	28,713	66,752	United Kingdom and Europe	13,784	41,596
Germany (including Samoa)	1,074	4,445	Germany (including Samoa)	1,070	7,403
Italy	783	3,458	Italy	14	79
Canada	337	1,224	Canada	470	2,013
United States	4,505	9,593	United States	2,042	7,684
India	1,860	17,555	India	475	1,649
Ceylon	161	392	Ceylon	118	329
Straits Settlements	20	72	Straits Settlements	106	281
Hong Kong	690	2,932	Hong Kong	302	826
Cape of Good Hope	159	630	Cape of Good Hope	1,073	4,119
Natal	76	442	Natal	1,047	4,799
Mauritius	26	59	Mauritius	27	187
Fiji	104	245	Fiji	1,719	4,796
Transvaal	153	614	Transvaal	2,450	13,635
Orange River Colony	4	20			
Total	579,310	2,076,146	Total	583,896	2,192,629

The following table covers a period of ten years, and distinguishes orders drawn on New South Wales from those drawn on other countries. It will be seen that the amount of money transmitted to countries outside New South Wales was exceeded by the money received in every year except the first of the decennial period. In the months of August, September, and October large numbers of shearers are at work in various parts of the State; many of them are but temporary visitors, whose homes are in Victoria and other adjoining States, and during their stay in New South Wales they transmit a portion of their earnings to their families, so that the balance of exchanges, so far as Victoria is concerned, is habitually against New South Wales. There is also a considerable remittance from the State to Great

Britain and Ireland, representing aid sent to relatives. On the other hand bread-winners belonging to New South Wales, but now seeking their fortune elsewhere, make remittances to their families who have remained behind; the principal remittances of this kind are received from Western Australia, Queensland, and the Cape of Good Hope:—

Year.	Issued in New South Wales.			Drawn on New South Wales.		
	Drawn on New South Wales.	Drawn on other Countries.	Total.	Issued and paid in New South Wales.	Issued in other Countries and paid in N.S.W.	Total.
	£	£	£	£	£	£
1896	1,019,556	294,039	1,313,595	1,014,040	413,480	1,427,520
1897	1,009,030	302,820	1,311,850	1,011,877	409,647	1,421,524
1898	1,062,350	309,377	1,371,727	1,062,816	369,557	1,432,373
1899	1,120,804	316,123	1,436,927	1,118,518	348,084	1,466,602
1900	1,182,554	325,413	1,507,967	1,178,713	362,822	1,541,535
1901	1,295,122	342,366	1,637,488	1,290,929	378,801	1,669,730
1902	1,436,625	324,524	1,761,149	1,440,190	371,873	1,812,063
1903	1,454,084	318,102	1,772,186	1,442,581	392,714	1,835,295
1904	1,517,976	316,958	1,834,934	1,514,235	408,552	1,922,787
1905	1,746,866	329,280	2,076,146	1,757,229	425,400	2,182,629

The system of postal notes has naturally caused a reduction of money-order business, but when full allowance is made on this score it will be found that there has been a considerable falling-off in the number and amount of transactions since 1892; the same shrinkage is visible in almost every form of mercantile activity.

It is the practice of New South Wales to pay a commission to those countries to which money is transmitted in proportion to the amount of the orders forwarded to each, the rate of commission varying from ½ to 1 per cent., and a similar allowance is made to the State by countries doing a return business. The amounts paid and received by the State on this account during the last ten years were as follow:—

Year.	Paid.	Received.
	£	£
1896	1,812	2,326
1897	1,890	2,290
1898	1,901	2,075
1899	1,925	1,964
1900	1,980	2,031
1901	2,106	2,118
1902	2,000	2,093
1903	2,094	2,206
1904	2,082	2,256
1905	1,821	2,240

The maximum amount of single orders to the United Kingdom, Germany (including Samoa and other German protectorates) Canada, Fiji, New Zealand, Cape Colony, Orange River Colony, Transvaal, Natal, Hongkong, India, Ceylon, Straits Settlements, and Egypt, is £40; also to Peru and the British Protectorate of Somaliland; but no single order payable in Italy, or the United States, can be issued for more than £20; to all other places the limit is £10. The following reduced rates of commission on interstate money orders came into force on 1st February, 1906. Not exceeding £2, 6d.; £2 to £5, 9d.; each additional £5 or fraction thereof, 9d. up to a maximum of £20 per money order. The commission on orders payable in the United

Kingdom, other British Possessions, and foreign countries is at the rate of 6d. for each £ or fraction thereof. The total amount of commission collected from the public for each of the ten years from 1896 to 1905 is given below, and also the excess of receipts over payments shown in the preceding table:—

Year.	Commission received.	Net Receipts from Other Countries.	Net Collections.
	£	£	£
1896	15,232	514	15,746
1897	15,133	400	15,533
1898	15,110	174	15,284
1899	15,874	39	15,913
1900	16,296	51	16,347
1901	17,650	12	17,662
1902	19,016	93	19,109
1903	19,265	112	19,377
1904	19,091	174	19,265
1905	19,313	419	19,732

No allowance has been made for the stamp duty of 1d. charged on all orders issued in New South Wales, and of 2d. imposed on all orders of £2 and upwards, issued elsewhere, paid in the State.

Postal notes were first issued in New South Wales on the 1st October, 1893, under the authority of a special Act of the Legislature.

The transactions for the ten years ended 1905 were as follow:—

Year.	New South Wales Postal Notes.			Postal Notes of other States of the Commonwealth of Australia paid in New South Wales.					
				Issued in—					
	Paid in New South Wales.	Paid in other states of the Commonwealth of Australia.	Total Value.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Total Value.
	£	£	£	£	£	£	£	£	£
1896	304,234	20,412	324,646	8,499	5,689	1,670	....	506	16,364
1897	354,260	23,021	377,281	9,205	6,058	1,693	....	570	17,526
1898	396,224	23,888	420,112	10,713	7,636	1,773	....	712	20,834
1899	424,645	25,303	449,948	11,613	10,301	2,118	....	979	25,011
1900	462,087	26,396	488,483	12,207	9,899	2,209	....	1,047	25,362
1901	482,067	26,365	508,432	12,652	9,300	2,529	163	1,029	25,673
1902	472,684	33,474	506,158	18,845	12,899	4,538	3,202	1,880	41,364
1903	525,423	56,181	581,604	23,343	17,833	5,222	5,855	3,098	55,351
1904	581,931	73,540	655,471	27,013	1,115	5,844	7,081	3,697	64,750
1905	637,465	85,703	723,168	35,084	28,535	8,752	9,170	5,712	87,253

NOTE.—The values shown above represent postal notes and affixed stamps.

No commission is paid by one State to another in respect of notes obtained for interstate use, but revenue is secured by the charge of poundage both by the State in which a note is issued and by that in which it is cashed. The poundage collected in New South Wales during 1896 was £7,839; during 1897, £9,092; during 1898, £10,099; during 1899, £10,966; during 1900, £11,850; during 1901, £12,141; during 1902, £11,022; during 1903, £11,627; during 1904, £12,921; and during 1905, £14,262.

BANKRUPTCY.

Prior to the 1st January, 1888, the transactions in insolvency were carried out under a Commissioner of Insolvent Estates, but under the Act of 1887, and the amendments of 1888 and 1896 which were consolidated under the Act 25 of 1898, the law is administered by a Judge in Bankruptcy. On the passage of the Act of 1887 it was anticipated that a much healthier tone in trade would ensue, and that there would be a considerable reduction in the number of debtors who would have recourse to the law to relieve them of their obligations. The impression then formed was not, however, realised in the earlier years of the operation of the Act, and sequestrations were just as numerous as under the repealed Act. A decided improvement, however, has taken place since 1893. During the eighteen years in which the present law has been in force 16,823 petitions in bankruptcy have been received; of these 14,201 were filed by the bankrupts themselves, and 2,622 on behalf of creditors. In 649 cases the petitions were either refused or withdrawn, leaving the total sequestrations actually made at 16,174. The following statement shows the number of bankruptcy petitions for each of the eighteen years during which the existing law has been in force:—

Year.	Petitions in Bankruptcy.			Petitions withdrawn, refused, etc.	Sequestration Orders granted.
	Voluntary.	Compulsory.	Total.		
	No.	No.	No.	No.	No.
1888	735	116	851	28	823
1889	935	166	1,101	39	1,062
1890	1,079	164	1,243	50	1,193
1891	1,016	222	1,238	49	1,189
1892	1,267	239	1,506	43	1,463
1893	1,535	209	1,744	59	1,685
1894	1,364	148	1,512	47	1,465
1895	1,080	200	1,280	61	1,219
1896	937	149	1,086	46	1,040
1897	755	90	845	19	826
1898	677	108	785	31	754
1899	521	112	633	21	612
1900	518	122	640	38	602
1901	359	103	462	24	438
1902	373	112	485	27	458
1903	366	117	483	20	463
1904	352	139	491	30	461
1905	332	106	438	17	421
Total......	14,201	2,622	16,823	649	16,174

The statement indicates that a regular decrease in the number of sequestrations has taken place since the financial crisis of 1893, the total for 1905 being only one-fourth of that in the year first mentioned, and even 402 less than in the fairly prosperous year of 1888. Added to the increase in the savings of the people, and the position disclosed by the life assurance returns, this is an indication of the growing prosperity of the State.

There are three ways by which a bankrupt may obtain his discharge—by the sequestration order made against him being annulled, by the release of his estate, or by a certificate of discharge being granted to him. The bulk of the certificates issued are obtained under the last-mentioned head; only 31 sequestration orders have been annulled, and 323 estates have been released since the existing Act has been in force, while 1,763 certificates of discharge have been granted. The number of certificates issued from the 1st January, 1888, to 31st December, 1905, was as follows:—

Year.	Sequestration Orders annulled.	Estates released.	Certificates of Discharge granted.	Compositions accepted.	Total Certificates issued.
	No.	No.	No.	No.	No.
1888	...	1	26	5	32
1889	...	14	114	7	135
1890	...	4	95	4	103
1891	...	3	309	...	312
1892	1	19	185	...	205
1893	...	6	152	2	160
1894	...	...	147	...	147
1895	...	12	142	...	154
1896	1	21	95	1	118
1897	1	25	66	1	93
1898	...	23	58	...	81
1899	2	23	62	3	90
1900	3	27	53	1	84
1901	4	32	58	...	94
1902	4	36	73	...	113
1903	4	24	45	1	74
1904	6	23	38	...	67
1905	5	30	45	...	80
Total......	31	323	1,763	25	2,142

The estates in respect of which certificates of discharge or release were granted numbered 2,086, or nearly 13 per cent. of the total sequestrations. In some few cases application is made for a certificate and refused; taking these into consideration it would appear that out of 100 bankrupts, 87 are unable or too indifferent to take the necessary steps to free themselves from bankruptcy. Under the law the property of an uncertificated bankrupt, even if acquired subsequently to sequestration, is liable to seizure on behalf of unsatisfied creditors, and as applications for certificates of discharge are the exception rather than the rule, it would appear that the great majority of bankrupts neither attain nor hope to attain a position in which they are likely to be disturbed by unsatisfied creditors. Before a certificate is granted all fees owing to the Court and official assignees must be paid, and it is certain that not a few who elect to remain uncertificated do so in order to avoid payment of these fees. The number of sequestrations during the eighteen years the Act has been in force was 16,174, and of these 14,032 remain uncertificated. During 1905 the total number of sequestrations was 421; the liabilities according to bankrupts' schedules, were £289,220, and the assets amounted to £160,123. The qualification "according to bankrupts' schedules" is necessary, as the returns of assets and liabilities established after investigation by the Court differ widely from those furnished by bankrupts:—

Year.	Sequestrations.	Nominal—		
		Liabilities.	Assets.	Deficiency.
	No.	£	£	£
1888	823	659,307	459,677	199,630
1889	1,062	794,603	396,723	397,880
1890	1,193	1,203,685	540,726	662,959
1891	1,189	989,778	454,211	535,567
1892	1,463	2,035,316	793,045	1,242,271
1893	1,685	1,527,985	905,763	622,222
1894	1,465	1,852,235	995,935	856,300
1895	1,219	1,142,637	747,053	395,584
1896	1,040	627,314	409,928	217,386
1897	826	610,111	347,469	262,642
1898	754	605,563	263,500	342,063
1899	612	321,913	175,345	146,568
1900	602	743,887	328,053	415,834
1901	438	207,092	103,478	103,614
1902	458	281,204	124,427	156,777
1903	463	230,429	123,037	107,392
1904	461	440,063	252,293	187,770
1905	421	289,220	160,123	129,097
Total	16,174	14,562,342	7,580,786	6,981,556

The dividend rates paid on the amount of proved liabilities of estates which have been wound-up are not given, as to establish such would involve an investigation of the transactions in each estate; and even this operation would not result in complete returns being established, as there are many estates which remain unsettled over a long period of years. There are two official assignees to assist the Court in winding-up the estates. Each official pays all money received by him to the Registrar in Bankruptcy, who places the amount to the credit of the Bankruptcy Estates Account, from which all charges, fees, and dividends are met. The official assignees are also required to furnish quarterly statements of the transactions in each estate during that period, and the figures given in the two statements following were obtained from these returns. The charges under each head were:—

Year.	Peremptory Charges.		Legal Costs.	Paid into Consolidated Revenue.		Commission to Official Assignees.	Total Charges.
	Auction.	Rent, Valuation, Labour, etc.		Court Fees.	Percentage.		
	£	£	£	£	£	£	£
1896	1,955	22,488	6,113	1,321	551	4,665	37,093
1897	1,617	13,929	8,100	1,293	691	5,129	30,759
1898	1,519	7,085	4,438	1,246	348	3,194	17,830
1899	1,364	6,435	4,062	1,062	267	3,031	16,221
1900	913	6,530	2,996	982	331	3,900	15,652
1901	777	5,172	4,275	881	396	3,224	14,725
1902	941	8,111	3,935	1,018	307	2,972	17,284
1903	1,542	6,426	3,318	1,077	404	3,125	15,892
1904	1,237	6,744	4,168	995	292	2,355	15,791
1905	805	4,878	3,589	971	419	2,678	13,340

The official assignees receive 2½ per cent. on the amount realised, and a similar rate on the amount of dividends declared; in addition to this the Judge may grant special remuneration. The dividends paid and the undivided balances at the end of each year were as follow:—

Year.	Dividends Paid.	Money in hands of Official Assignees.		Balance of Bankruptcy Estates Account.
		Unpaid and unclaimed Balances.	Unpaid Dividends.	
	£	£	£	£
1896	31,557	9,610	747	23,553
1897	37,900	1,474	1,065	13,208
1898	19,556	380	355	12,609
1899	16,786	206	925	14,660
1900	19,770	1,269	1,760	17,684
1901	30,928	659	605	11,537
1902	17,439	265	1,139	14,414
1903	25,698	204	1,366	12,810
1904	17,202	......	549	14,748
1905	24,568	143	2,044	15,217

On the 30th June, 1906, there remained to the credit of the Bankruptcy Unclaimed Dividend Fund £3,318, and to the Bankruptcy Suitors' Fund, to which account interest earned by the Unclaimed Dividend Fund is placed, the sum of £2,024.

District Registrars in Bankruptcy have been appointed throughout the State, and in most instances the positions are filled by Police Magistrates or other court officials. District Registrars have the same powers and jurisdiction as the Registrar in respect to examinations of bankrupts and the technical business of the court.

The following table gives the callings of persons who became bankrupt during 1905; no trade, however, is recorded which showed less than 10 bankrupts:—

Calling.	No.	Calling.	No.
Labourers	56	Clerks	14
Miners	44	Civil Servants	13
Hotel-keepers	28	Contractors	11
Farmers	17	Others (under 10 Sequestrations)	219
Storekeepers	16		
Agents	16	Total	421

The foregoing pages deal with the commercial aspect of bankruptcy; other information relating to legal procedure will be found in the chapter dealing with Law and Crime.

TRANSACTIONS IN REAL ESTATE.

The Real Property Act, which was consolidated in 1900, came into operation in 1862, transactions in real estate previously having been regulated by the Deeds Registration Act of 1843. The Real Property Act completely revolutionised the procedure in regard to land transfers, and was modelled on the lines of legislation in South Australia adopted at the instance of Sir R. R. Torrens—hence the popular name of Torrens' Act. The chief features of the Act are the transferring of real property by registration of title instead of by deeds; the absolute indefeasibility of the title when registered; and the protection afforded to owners against possessory claims, as a title issued under the Act stands good notwithstanding any length of adverse possession. From the passing of Torrens' Act all lands sold by the Crown were conveyed to the purchasers under its provisions, and the provisions of the old law were restricted to transactions in respect of grants already issued. The area for which grants under the old system had been issued to 1862 was 7,478,794 acres; since then 1,639,228 acres have been brought under the provisions of Torrens' Act, so that the area still under the Deeds Registration Act is 5,839,566 acres.

Lands are allowed to be placed under Torrens' Act only when their titles are found to be unchallengeable; but thousands of acres are brought under the Act during the course of every year, so that it is merely a question of time when the whole of the lands of the State will be under a uniform system. The area of Crown lands conveyed, and of private lands brought under the Real Property Act during the decade ended 1905 was as follows:—

Year.	Crown Lands conveyed under the Act.		Private Lands brought under the Real Property Act.		Total.	
	Area.	Value.	Area.	Value.	Area.	Value.
	acres.	£	acres.	£	acres.	£
1896	320,474	226,440	53,717	861,811	374,191	1,088,251
1897	268,014	161,694	26,941	617,984	294,955	779,678
1898	434,692	236,090	25,169	662,888	459,861	898,978
1899	551,585	396,315	59,644	776,863	611,229	1,173,178
1900	526,381	427,285	47,224	837,315	573,605	1,264,600
1901	764,431	641,361	56,877	692,641	821,308	1,334,000
1902	897,591	813,015	46,678	1,089,235	944,269	1,902,252
1903	1,403,994	1,181,102	56,492	1,045,780	1,460,486	2,226,882
1904	1,557,667	1,109,688	38,890	907,371	1,596,557	2,017,059
1905	1,834,802	1,390,255	55,251	725,508	1,890,053	2,115,763

For the whole period during which the Real Property Act (Torrens') has been in operation, 25,502,786 acres, valued at £25,971,450, have been conveyed under its provisions, and 1,639,228 acres, valued at £27,818,457, have been brought under it, and deeds under the old Act to the same extent cancelled.

The transfers and conveyances of private lands which take place during ordinary years indicate in some measure the condition of business; the volume of these transactions, however, in some years cannot be relied upon as giving more than an indication of speculation or inflation. In the following table, which covers ten years, there is shown the consideration money paid on sales of private lands during each year, excluding, of course, lands sold on long terms. During 1888 land to the value of £11,068,873 changed hands, but in 1905 the amount had fallen to £6,865,053. The year 1888 marked the last flickering of the boom period, when land speculation proceeded on a scale of unexampled recklessness. The other extreme was reached in 1897, when the value of the land transferred was only slightly more than in 1877, and nearly £1,000,000 less than in 1896. Although the year 1905 showed a greater activity than any of the years since 1891, with the exception of 1902 and 1903, it is evident that transactions in land still very largely represent conveyances by mortgagors and mortgagees, genuine speculation in land having almost wholly died out :—

Year.	Conveyances or Transfers.		
	Under Old System.	Under New System.	Total.
	£	£	£
1896	2,212,158	2,009,172	4,221,330
1897	1,149,989	2,101,390	3,251,379
1898	1,275,316	2,251,140	3,526,456
1899	1,873,076	3,099,279	4,972,355
1900	2,265,901	3,444,209	5,710,110
1901	2,263,853	3,986,229	6,250,082
1902	2,519,247	4,350,050	6,869,297
1903	3,316,360	4,025,286	7,341,646
1904	2,524,799	4,138,994	6,663,793
1905	2,197,031	4,668,022	6,865,053

As already mentioned, the Real Property Act provides that on the issue of a certificate the title of the person named on the certificate is indefeasible. Provision is, however, made for error in transfer, by which persons might be deprived of their rightful property, as should the transfer be made to the wrong person the holder of the certificate cannot be dispossessed of his property unless he has acted fraudulently. To indemnify the Government for compensating persons who, through error, may have been deprived of their properties, an assurance fund has been created by a contribution of one half-penny in the pound on the declared capital value being levied on property first brought under the Act, and upon transmissions of titles of estates of deceased proprietors. It is an undeniable proof of the value of the Act, and the facility of its working, that payments from the assurance fund to the 31st December, 1905, in respect of titles improperly granted, amounted to only £16,326. The amounts paid into the Treasury on account of the assurance fund during each of the ten years ended 1905 were as follow :—

Year.	Collections, less Refunds.	Compensation and Cost of Legal Actions.	Amounts Credited to Fund.
	£	£	£
1896	3,912	12	3,900
1897	4,721	35	4,686
1898	4,808	2	4,806
1899	5,272	324	4,948
1900	4,284	12,414	......
1901	4,738	113	4,625
1902	5,703	20	5,683
1903	7,688	200	7,488
1904	7,162	58	7,104
1905	7,273	......	7,273

The assurance fund, which forms part of the Trust Fund of the Treasury, amounted to £243,359 at the close of 1905, and the invested portion bears interest at rates of 3 and 4 per cent. The accretions to this fund—that is, interest and collections—average now fully £13,000 per annum, while the total withdrawals during the whole currency of the Act have reached £16,326; thus, as there is every likelihood of the amount annually added growing larger as years roll on, the fund bids fair to attain considerable dimensions. The administration of this fund is now controlled by the Sinking Fund Commission.

MORTGAGES.

All mortgages, except those regulated by the Bills of Sale Act of 1898 and the Merchant Shipping Act of 1894, are registered at the Registrar-General's Office, and it is a fair assumption that the number recorded represents the bulk of the mortgages effected. Where more than one mortgage has been effected on the same property, the mortgages take priority according to the time of registration, and not in accordance with their respective dates. The amount of consideration for which a mortgage stands as security is not always stated in the deeds, the words "valuable consideration" or "cash credit" being inserted instead of a specific sum in many of the transactions of banks and other loan institutions, in cases where the advances made are liable to fluctuation; and as this frequently occurs when the property mortgaged is of great value, an exact statement of the total advances against mortgages cannot be given. It must be borne in mind, therefore, that the figures in the tables given below refer only to cases in which a specific amount is stated in the deeds, whether that amount be the sum actually advanced or not. What is true of mortgages registered holds good for discharges, the amount of which, as shown in the tables, is still further reduced by the exclusion of mortgages which have been satisfied by foreclosure or seizure, a record of which is not available. Many mortgages, therefore, appear in the official records as current, notwithstanding that the property which they represent has passed away from the mortgagor.

MORTGAGES OF REAL ESTATE.

Mortgages of land are registered either under the Deeds Registration Act, No. 22 of 1897, or the Real Property Act of 1862, and Real Property Act of 1900, according to the Act under which the title of the property stood at the time of registration. The mortgages registered for each of the ten years ended 1905 were :—

Year.	Registrations—					
	Under Deeds Registration Act.		Under Real Property Act.		Under both Acts.	
	Number.	Consideration.	Number.	Consideration.	Number.	Consideration.
		£		£		£
1896	7,855	5,428,148	3,677	4,652,779	11,532	10,080,927
1897	3,898	4,147,583	3,571	4,354,412	7,469	8,501,995
1898	3,861	4,698,034	3,617	4,807,182	7,478	9,505,216
1899	3,876	4,280,730	3,923	4,282,651	7,799	8,563,381
1900	3,468	3,839,860	3,991	4,965,746	7,459	8,805,606
1901	3,651	3,917,935	4,575	5,036,375	8,226	8,954
1902	3,936	3,762,014	5,548	5,668,098	9,484	9,430
1903	4,346	4,199,853	6,320	6,273,535	10,666	10,473
1904	3,906	3,714,248	6,387	6,292,235	10,293	10,006,
1905	3,921	3,207,238	7,220	6,437,963	11,141	9,645,201

The consideration given generally represents the principal owing; in some cases, however, it stands for the limit within which clients of banks and other loan institutions are entitled to draw, though many of these clients may be in credit while their property is mortgaged and unreleased.

The amount of mortgages discharged has always been much less than the amount registered, for, as previously mentioned, the discharges do not include foreclosures, which if not formally registered as discharges are nevertheless mortgages cancelled. The volume of the releases is also reduced by mortgages paid off in instalments, as the discharges may be given for the last sum paid, which might happen to bear a very small proportion to the total sum borrowed; and, further, the total of discharges is reduced owing to the practice, now largely followed, of allowing mortgages maturing on fixed dates to be extended for an indefinite period.

Conveyances under mortgage or purchases of equity of redemption, and transfers which represent dealings between mortgagees, are, in point of value, unimportant; nevertheless, to complete the transactions in mortgages, returns covering the period of ten years ended 1905 are given below. The table is incomplete, as the consideration in respect of conveyances and transfers under the Real Property Act cannot be given; while the figures for 1905 are exclusive of one conveyance under mortgage, and 108 transfers of mortgages, for which the amounts involved are not stated:—

Year.	Deeds Registration Act of 1843.				Transfers of Mortgage under Real Property Act.
	Conveyances under Mortgage.		Transfers of Mortgages.		
	Number.	Consideration.	Number.	Consideration.	Number.
		£		£	
1896	467	256,967	370	287,361	227
1897	450	280,583	146	174,379	215
1898	406	276,803	200	306,488	258
1899	285	128,423	166	380,363	278
1900	162	142,667	273	526,542	254
1901	246	161,027	169	203,913	239
1902	290	146,630	167	116,351	244
1903	331	142,497	151	183,107	270
1904	390	170,426	117	115,366	265
1905	311	117,268	121	269,420	250

MORTGAGES ON LIVE STOCK AND WOOL.

Liens on wool, mortgages on live stock, and liens on growing crops are registered under special Acts, the two first mentioned under a temporary measure passed in 1847, which was continued from time to time and became permanent by a special enactment in 1860, and the liens on growing crops under one passed in 1862. The mortgages on live stock are current till discharge, while the liens on wool mature at the end of each season and terminate without being formally discharged. Mortgages under each Act are valid without the stock or crops being delivered to the mortgagees. The figures relating to live stock are given in some detail, as they throw considerable light on the condition of the great industry of the country. They must, however, be taken with this qualification, that the amount stated represents in many cases merely nominal indebtedness, and the advances are not in every instance made to persons financially embarrassed. But with full allowance on this score, the figures given hereunder will make it plain how large a hold the lending institutions have upon the great pastoral industry. The following statement shows the liens on wool and the mortgages on live stock registered during each of the ten years ended 1905. Sums secured both by a lien on the wool and by mortgage of the sheep, are included under the head of mortgages only :—

Year.	Preferable Liens on Wool.			Mortgages on Live Stock.				
	Number.	No. of Sheep.	Consideration.	Number.	No. of Sheep.	No. of Horned Cattle.	No. of Horses.	Consideration.
			£					£
1896	2,864	11,309,327	1,841,949	1,768	4,748,695	93,550	24,520	1,705,245
1897	2,183	9,277,004	1,056,721	1,678	4,290,304	62,644	13,474	1,418,884
1898	2,012	8,492,863	1,048,264	1,884	2,192,645	95,454	14,375	1,516,887
1899	1,947	6,773,749	726,589	2,063	3,540,555	87,039	14,385	1,098,655
1900	1,758	5,062,024	790,421	2,102	3,708,874	59,358	12,062	1,667,583
1901	1,741	5,278,286	717,249	2,194	3,371,782	67,537	12,492	1,191,815
1902	1,617	4,977,621	791,621	1,872	3,025,382	57,407	10,704	649,007
1903	1,399	3,045,995	569,899	2,090	2,303,295	64,417	13,143	845,979
1904	1,473	3,363,069	669,742	2,354	2,457,303	99,610	12,697	1,076,967
1905	1,618	3,704,577	643,953	2,465	2,604,613	80,020	15,627	1,188,076

To supplement the information just given, the following table, which shows the proportion of the flocks of the State covered by lien and mortgage, has been compiled. In addition to the numbers given, a considerable quantity of stock is in the hands of financial institutions as mortgagees in possession, but an exact statement of this it is not possible to obtain :—

Year.	Sheep.			Horned Cattle.			Horses.		
	Total in State.	Involved in Lien and Mortgage.	Proportion involved to total flocks.	Total in State.	Involved in Mortgage.	Proportion involved to total herds.	Total in State.	Involved in Mortgage.	Proportion involved to total number.
	No.	No.	per cent.	No.	No.	per cent.	No.	No.	per cent.
1896	48,318,790	16,058,022	33·2	2,226,163	93,550	4·2	510,636	24,520	4·8
1897	43,952,897	13,567,308	30·9	2,082,696	62,644	3·0	498,034	13,474	2·7
1898	41,241,004	10,685,508	25·9	2,029,516	95,454	4·7	491,553	14,375	2·9
1899	36,213,514	10,314,304	28·5	1,967,081	87,039	4·4	492,260	14,385	3·0
1900	40,020,506	8,770,898	21·9	1,983,116	59,358	3·0	481,417	12,062	2·5
1901	41,857,099	8,650,018	20·7	2,047,454	67,537	3·3	486,716	12,492	2·6
1902	26,649,424	8,003,003	30·0	1,741,226	57,407	3·3	450,125	10,704	2·4
1903	28,656,501	5,319,290	18·7	1,880,578	64,417	3·4	458,014	13,143	2·9
1904	34,526,894	5,820,372	16·9	2,149,129	99,610	4·6	482,663	12,697	2·6
1905	39,506,764	6,309,190	15·9	2,337,973	80,020	3·4	506,884	15,627	3·1

The mortgages shown represent the annual registrations ; hence the sheep involved were those pledged during twelve months only ; and as the currency of a mortgage on live stock, unlike that of a lien which terminates at the end of the season, is variable, it follows that the figures in any year do not represent the total number of sheep covered by mortgage, and that the proportion of the flocks held under lien and mortgage, after making every allowance for releases, is therefore somewhat higher than that stated. This remark applies equally to the figures given for horned cattle and for horses.

DISCHARGES OF MORTGAGES.

The number of discharges registered amounts in an ordinary year to about one-sixth of the mortgages of live stock registered. The figures for the ten years ended 1905 were :—

Year.	Number.	Amount.	Year.	Number.	Amount.
		£			£
1896	432	886,218	1901	438	960,453
1897	385	549,063	1902	387	751,455
1898	423	821,644	1903	397	532,868
1899	432	957,082	1904	410	402,398
1900	521	687,787	1905	509	644,569

There were also 20 discharges of liens, amounting to £5,179 during 1905; these represent transfers of security and repayments during the season, as liens terminate by effluxion of time at the close of the wool season.

LIENS ON GROWING CROPS.

Under the provisions of the Act, liens, the duration of which must not exceed one year, are made on agricultural and horticultural produce. Such advances do not ordinarily reach large sums, either individually or in their total, as there is an element of uncertainty in the security offered. During the last ten years the advances ranged from £109,342 to £202,605 per annum. The liens registered in 1905 were 1,520 in number, covering advances to the extent of £172,368 :—

Year.	Number.	Consideration.	Year.	Number.	Consideration.
		£			£
1896	2,567	202,605	1901	1,390	131,814
1897	1,947	151,334	1902	1,077	109,342
1898	1,779	161,216	1903	1,607	181,234
1899	1,712	158,359	1904	1,406	159,620
1900	1,514	161,887	1905	1,520	172,368

MORTGAGES ON SHIPS.

Mortgages of registered British vessels are dealt with under the Merchant Shipping Act of 1894. The mortgages are, according to the Act, divided into two classes, one in which the ship is the sole security, and the other in which the advances are made on the security of what is termed in the Act "the account current," which may comprise ships, wharfage appliances, &c. Registrations are effected at the two ports of registry, Sydney and Newcastle; the returns given in the subjoined statements apply to both ports :—

Year.	Mortgage on ships only.				Mortgage on account current.			
	Sailing Vessels.		Steam Vessels.		Sailing Vessels.		Steam Vessels.	
	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.
		£		£		£		£
1896	18	6,165	18	19,630	9	5,450	4	7,250
1897	21	7,745	23	22,917	2	1,509	12	12,934
1898	13	4,652	9	5,840	5	3,550	12	21,258
1899	10	4,525	16	27,487	6	13,250	18	42,104
1900	27	11,839	10	10,340	10	1,555	7	9,891
1901	12	4,645	12	12,690	6	2,951	18	13,745
1902	10	3,385	12	32,050	11	14,681	10	35,601
1903	11	3,768	20	48,571	1	1	5	6,251
1904	8	4,127	27	29,433	10	7,703	7	24,200
1905	5	1,975	7	33,581	23	78,317	11	90,351

The number of mortgages registered in which ships figure as the sole security represents the vessels encumbered—that is to say, "one ship one mortgage"; the number of mortgages in the other class may or may not represent the number of vessels mortgaged. The discharges of mortgages during the same period were as follow:—

Year.	Mortgage on ships only.				Mortgage on account current.			
	Sailing Vessels.		Steam Vessels.		Sailing Vessels.		Steam Vessels.	
	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.
		£		£		£		£
1896	15	5,230	9	13,553	2	501	2	150
1897	11	3,193	18	16,643	4	840	7	4,800
1898	16	6,659	8	10,002	5	1,513	1	1
1899	13	7,494	14	21,185	4	2,303	12	16,459
1900	7	2,575	11	4,361	4	1,052	15	4,383
1901	26	6,700	6	8,675	5	2,717	15	513
1902	10	3,150	8	6,277	6	595	4	502
1903	3	1,230	5	3,268	4	13,400	7	993
1904	6	1,832	11	6,585	6	1,599	9	4,758
1905	13	4,443	10	5,011	3	4	14	10,426

In some cases of mortgages on account current the amount of consideration is not stated, and the figures given must be accepted with this qualification.

BILLS OF SALE.

All mortgages of personalty other than ships and shipping appliances, wool, live stock, and growing crops, are filed and entered at the Supreme Court under the Bills of Sale Act of 1855, as consolidated by Act No. 10 of 1898. This Act provides that each document shall be filed and entered within thirty days after it is made or given, otherwise the transaction is illegal; and that the registration shall be renewed every twelve months; and to prevent fraud and imposition the records are open to the inspection of the public. The total amount of advances annually made on bills of sale is not readily available, but judging from the number of bills filed the sum must be considerable. The provisions of the Act are availed of by all classes of the community, but brewers and money lenders figure conspicuously among the transferrees. No complete record is made of the bills terminated voluntarily or by seizure, the official records showing only those discharged in the ordinary way. Seizures of the security given, which generally comprises household furniture and stock-in-trade, are common occurrences, and it is to be regretted that no record of them is kept; but, as previously shown, the neglect in the registration of foreclosures is a weakness in the procedure under all Acts regulating mortgage transactions. The bills filed and the discharges registered for the ten years ended 1905 were as follow:—

Year.	Registrations.		Renewals under Bills of Sale Act of 1898.
	Filed in Supreme Court.	Satisfied or orders for discharge made.	
1896	2,375	158	......
1897	3,368	156	......
1898	3,725	220	1,375
1899	3,945	223	1,742
1900	3,503	207	2,005
1901	3,219	209	1,922
1902	3,441	257	2,051
1903	3,614	179	2,238
1904	3,039	261	2,221
1905	2,728	224	2,187

SUMMARY OF MORTGAGES.

The volume of mortgages registered and discharged under each class is given below. As the returns are incomplete, from causes already alluded to, no general total has been established. The following table shows the total consideration of the mortgages registered during each of the last five years :—

Property.	1901.	1902.	1903.	1904.	1905.
On Real Estate—	£	£	£	£	£
Under Deeds Registration Act	3,917,985	3,762,014	4,199,853	3,714,248	3,207,238
,, Real Property Act	5,036,375	5,668,098	6,273,535	6,292,235	6,437,963
On Personalty—					
Liens on Wool	717,249	791,621	569,899	669,742	643,953
Mortgages on Live Stock	1,191,815	649,007	845,979	1,076,967	1,188,076
Liens on Growing Crops	181,814	109,342	181,234	159,620	172,368
Mortgages on Ships	17,535	35,435	52,339	33,560	5,556
,, ,, and Shipping Appliances	16,696	50,282	6,252	31,903	168,668
Bills of Sale	Not available.				

The consideration of the mortgages of which discharges were registered during each of the last five years is given below :—

Property.	1901.	1902.	1903.	1904.	1905.
On Real Estate—	£	£	£	£	£
Under Deeds Registration Act	3,549,924	3,140,189	2,615,447	2,447,905	2,829,776
,, Real Property Act	3,927,230	3,823,062	2,940,467	2,914,057	3,621,607
On Personalty—					
Liens on Wool	At end of each Season.				
Mortgages on Live Stock	960,453	751,455	532,268	402,398	644,569
Liens on Growing Crops	At end of each Season.				
Mortgages on Ships	15,375	9,427	4,493	8,417	9,454
,, ,, and Shipping Appliances	3,230	1,097	14,393	6,857	10,430
Bills of Sale	Not available.				

DISTRIBUTION OF PROPERTY.

In making estimates of the wealth of a country the probate value of estates has frequently been taken as the basis of the calculations. This, however, is hardly correct, as the probate returns give only the apparent property left by deceased persons, without taking into account the question of debts. To assume that the average amount of property left by each adult who dies during a given period represents the average possessed by each living adult is open to two objections. First the average age of adults who die is much greater than that of those still surviving, and secondly the wealth of an individual increases with years, and, generally speaking, is greatest at death. The valuations of estates for stamp duty purposes are, however, on a different plane. Such valuations are far below those exhibited in the probate returns, for while during the ten years ending 31st December, 1906, the probate returns show a total of £69,760,685, the attested value of the same estates for stamp duty was given at £56,214,286, or over 19 per cent. less. If it were possible to obtain without excessive trouble the ages of persons dying, the stamp duty returns would possess considerable value in estimating the wealth of the community, but as matters stand it has not been considered advisable to utilise them. Some useful statistical comparisons may, however, be drawn from a consideration of the probate returns. A table is annexed showing the number of estates and amount on which probate duty paid in each of the years 1896 to 1906, the amount on which stamp duty was paid in each of the same years being given in the last column :—

Year.	Probate Court Returns.		Stamp Duty Returns.
	No. of Estates.	Amount.	Amount.
		£	£
1896	2,488	6,694,916	4,610,485
1897	2,210	5,925,042	5,107,056
1898	2,231	5,925,366	4,658.310
1899	2,505	5,063,552	4,136,998
1900	2,452	4,731,032	3,625,044
1901	2,657	7,033,459	5,312,002
1902	2,782	5,807,620	4,688,810
1903	2,767	7,179.882	5,803,652
1904	2,850	6,155,963	4,912,110
1905	2,804	7,714,416	6,121,389
1906	2,852	7,529,437	6,738,430
Total	28,598	69,760,685	56,214,286

As the table shows, the number of estates dealt with during the period reached 28,598, the total assessed value for probate being £69,760,685. According to these figures, the average value of estate left by each person who died possessed of property was £2,439. Allowing for overstatement the correct average value would be about £1,966.

The following information gleaned from returns collected by the Stamps Office in Sydney, in connection with assessment of estates of deceased persons, gives the residence of owners of the £56,214,286 on which stamp duty was paid during the last eleven years :—

	£	Proportion per cent.
New South Wales	45,605,817	81·13
Europe, including Great Britain	5,727,676	10·19
Victoria	3,380,073	6·01
Other Australian States and New Zealand	1,268,575	2·26
Elsewhere	232,145	0·41
Total...................................	56,214,286	100·00

From the above distribution it would seem that 18·87 per cent. of the private property in New South Wales is possessed by dwellers outside its confines, Europe, including Great Britain, holding 10·19 per cent. ; Victoria, 6·01 per cent. ; other Commonwealth States and New Zealand, 2·26 per cent. ; other countries, 0·41 per cent.

Some idea of the proportion of the whole population possessing estates of sufficient value to be the subject of specific bequest may be gained from a comparison of the number of persons leaving property at death, with the total number of persons dying during a fixed period. In the following table such a comparison has been instituted for quinquennial periods since 1880, the figures showing the proportion of persons dying possessed of property per hundred of the total deaths in each quinquennium :—

Period.	Proportion of Estates per 100 deaths of total population.
	per cent.
1880-84..............................	11·0
1885-89..............................	11·6
1890-94..............................	13·2
1895-99..............................	14·9
1900-04..............................	17·0
1905-06..............................	18·8

Such a distribution of wealth as the above figures betoken is without parallel in any other country in the world. A pleasing reflection, moreover, is afforded by the fact that of the entire population of New South Wales, more than one in six is a property owner, and that the ratio of distribution shows a comparatively regular increase. New South Wales, too, emerges more than satisfactorily from a comparison with the other Commonwealth States, for although Victoria and South Australia can show a wider diffusion of wealth, the position there is dependent on the circumstance that the population in those States is increasing at a much less rapid rate than is the case with the mother State.

A still more potent illustration of the wide distribution of property in New South Wales is afforded by the next table, which shows the proportion of estates per 100 deaths of adult males, as well as the proportion per 100 deaths of adult males and females. Some inquirers neglect the latter method of comparison, but seeing that large numbers of females are possessors of valuable property the fact should certainly be taken into consideration in order to arrive at a just estimate of the distribution of private wealth. The figures are given for quinquennial periods, commencing with the year 1880:—

Period.	Proportion of Estates per 100 deaths of adult Males.	Proportion of Estates per 100 deaths of adult Males and Females.
1880-84	34·6	22·3
1885-89	37·5	23·8
1890-94	41·2	25·8
1895-99	42·7	26·2
1900-04	46·0	27·8
1905	47·8	28·6

The same weakness, however, applies to these figures, as is the case with those previously given in regard to the values, for inquiry shows that during the last eleven years three in every hundred estates, concerning which probate or letters of administration were granted, proved to be without assets, so that the proportions must be somewhat reduced.

It should be remembered that the statement that there is a wide distribution of property in New South Wales must be taken relatively. The number of adults in the State in 1905 is estimated at 760,800, so that on the basis of those who died, the property owners totalled about 215,000, the remaining 545,800 being without property. The following table may prove of interest as showing the distribution of property amongst the persons who died during the eleven years 1896–1906:—

Category.	Number of Persons dying with Property.	Proportion of total adults in each category per 10,000.	Total Value of Estates of deceased.	Percentage of Property belonging to persons in each category.
	No.	No.	£	per cent.
£50,000 and over	139	51	18,326,548	33·97
£25,000 to £50,000	164	60	5,831,472	10·81
£12,500 to £25,000	345	125	6,057,465	11·23
£5,000 to £12,500	898	327	6,995,220	12·97
£200 to £5,000	17,287	6,289	15,947,746	29·56
Under £200	8,653	3,148	790,163	1·46
Total	27,486	10,000	53,948,614	100·00

The difference between the totals in the first and third columns in the above table and those in the table on the preceding page, arise from the fact that in some cases the value of the deceased estate could not be ascertained.

From this it is calculated that about 1,100 persons own 34 per cent. of the whole private wealth of the State, and 2,400 persons hold 45 per cent. of the total. Probably half the entire property in the State is in the hands of not many more than 3,000 persons.

In dealing with estimates of property and incomes, there seems to be practically a tacit agreement that the wealth owned by women is a negligible quantity. That such is not the case will be evident from a perusal of the following figures, which give details referring to both sexes of property-owners for the eleven years—1896-1906 :—

	Males.	Females.
Number of persons dying who had property	19,676	7,535
Number residing in New South Wales	18,368	7,193
Number residing elsewhere	1,308	342
Value of property devised	£48,760,900	£7,453,400
Average value of estates	£2,478	£989

PUBLIC FINANCE.

SYSTEM OF REVENUE AND EXPENDITURE ACCOUNTS.

A complete revolution in the system of keeping the public accounts was effected on the 18th November, 1895, when an Act amending the Audit Act of 1870 received the Royal Assent. It was thereby declared "that all appropriations from the Consolidated Revenue Fund shall lapse at the close of the financial year to which they refer, and from the 1st day of July, 1895, the cash receipts within the financial year shall be considered as the actual income, and the cash payments during the same period the actual outlay." This introduced what is usually termed the "cash basis" which is in operation in several of the adjoining States, and has proved to be in the interests of economy and good government. Prior to the adoption of this system, the expenditure for the services of a year and the actual expenditure during that year could only be shown by two different methods of accounts. When a specific appropriation was made for any service, the expenditure incurred under such authorisation would be charged against the year for which the vote was taken, irrespective of the date when the payments were made; and, therefore, the public accounts for any year could not be closed until all appropriations lapsed, or were written off or exhausted. The consequence was, that when the expenditure exceeded the income, there were frequent differences of opinion between the incoming and outgoing Treasurers as to the propriety of charging items, sometimes of large amount, to particular years, with the result that conflicting and irreconcilable statements were made, to the confusion of the uninitiated and the detriment of the public credit.

Even under the present circumstances, an inquirer may occasionally have some trouble in comprehending the most carefully prepared statement of the finances of the State, for he must ever keep before his eyes the fact that the term "expenditure" in the official statements does not necessarily possess always the same meaning. There are refunds, advances, cross entries, cancellations, &c., to be noted, so that any presentations of the accounts is rarely complete in itself.

The Audit Act Amendment Act of 1895, subsequently repealed by the Audit Act, 1898, and consolidated and amended by the Audit Act, 1902, having placed the public income and expenditure on a cash basis, the financial position of the State can be set forth with clearness. To arrive at a satisfactory conclusion in respect of the public accounts, however, it is necessary to consider the Treasurer's Advance Account, and for the years 1899, 1901, 1902, and 1903, the Expenditure Suspense Account, in conjunction with the expenditure in chief for the year. Under the cash system, the expenditure should be debited to the year in which the payment is made, and not to the year in which the appropriation is authorised and the adjustment effected. This method has been adopted in the subsequent statements relating to expenditure from Consolidated Revenue, and an analysis of the Treasurer's Advance Account since the 1st July, 1896, and the Expenditure Suspense Account for the years ended 30th June, 1899, 1901, 1902, and 1903, has been carried out, and the payments attached to the year in which they were actually made.

From the 1st July, 1897, to the 30th June, 1906, there was appropriated for the public service a sum of £107,610,624, while the actual revenue obtained was £107,684,096. The actual excess of expenditure in some years, however, as will be seen from the statement given below, was sufficiently serious in itself. The figures are exclusive of advances repaid and made :—

Year ended 30th June.	Gross Revenue.	Gross Expenditure.	Excess of Revenue over Expenditure.	Excess of Expenditure over Revenue.
	£	£	£	£
1897	9,288,359	9,495,726	....	207,367
1898	9,482,092	9,476,619	5,473	....
1899	9,754,185	9,743,509	10,676	....
1900	10,203,931	10,316,381	....	112,450
1901	10,805,543	10,922,862	....	117,319
1902	11,178,214	11,179,031	....	817
1903	11,532,231	11,703,397	....	171,166
1904	11,453,744	11,525,304	....	71,560
1905	11,514,324	11,372,481	141,843	....
1906	12,471,473	11,575,255	896,218	....

One unacquainted with the peculiarities of state finance might find it hard to understand how it is possible for a large deficit to have accumulated, and an expenditure in excess of revenue to have been still further indulged in. The explanation is simple. Through the operation of various Acts of the Legislature, and the accumulations in the Government Savings Bank, the Treasury has at its disposal large sums in trust, and by the use of this money the accumulated deficits have been temporarily met. When in 1889 the deficit was consolidated, and Parliament authorised the issue of Treasury Bills to pay it off, these bills were not issued to the public, but, by entries in the books of the Treasury, the necessary sum was drawn from the Trust Funds in hand, and invested in the bills. This was only a formal operation, as the money had already been loaned to the revenue, and the issue of the bills simply turned a floating debt into one for a fixed term.

The references to appropriations would be incomplete without the subjoined statement, which shows the total appropriations for the services of each year subdivided into three heads. The amounts given in the first two columns taken together represent the Estimates-in-Chief for each year:—

Year ending 31st December.	Amount appropriated during year.		Amount appropriated in subsequent years.	Total amount authorised to be expended from Consolidated Revenue from January, 1887, to June, 1906.
	Special appropriation (Fixed Statutory Liabilities).	Annual Votes.		
	£	£	£	£
1887	2,082,306	6,398,360	573,196	9,053,862
1888	2,090,326	6,416,595	632,064	9,138,985
1889	2,126,379	7,067,272	300,125	9,493,776
1890	2,481,145	6,742,928	585,110	9,809,183
1891	2,533,116	7,117,053	1,108,783	10,758,952
1892	2,756,958	8,045,007	486,448	11,288,413
1893	2,924,195	7,105,478	483,485	10,513,158
1894	3,028,297	6,750,537	425,123	10,203,957
*1895	1,472,412	3,405,451	45,476	4,923,339
†1896	2,759,564	6,705,697	26,331	9,491,592
†1897	2,663,223	7,259,663	....	9,922,886
†1898	2,936,937	6,635,460	....	9,572,397
†1899	2,955,176	6,844,773	....	9,799,949
†1900	2,999,711	7,104,356	....	10,104,067
†1901	3,058,239	7,573,983	....	10,632,222
†1902	3,512,817	7,569,778	....	11,082,595
†1903	3,835,592	7,742,391	....	11,577,983
†1904	4,038,600	7,550,389	....	11,588,989
†1905	4,224,613	7,489,512	....	11,714,125
†1906	4,160,016	7,455,395	....	11,615,411

* Six months ended 30th June. † Twelve months ended 30th June.

It will be noticed that there is a large annual expenditure provided for under Special Acts apart from the annual appropriations of Parliament. The special appropriations form a primary charge on each year's revenue collections.

General Banking Account.

The following table has been included for the purpose of showing the Government banking operations in as clear a light as possible. It indicates each of the main accounts under which the Government conducts its financial business, the subsidiary accounts being operated on under one or other of the headings enumerated. The Audit Act of 1902 provides that the Treasurer may agree with any Bank or Banks for the transaction of the general business of the State. The accounts are kept under four headings, viz., Consolidated Revenue Account, General Loan Account, Trust Account, and Special Deposits Account; but other accounts may be opened if necessary. All moneys paid into any of the accounts mentioned are declared to be "public moneys," and for interest purposes the several accounts are treated as one account. The Special Trust Accounts, which consist principally of "Supreme Court Moneys," are not controlled by the Audit Act, as they are operated on directly by the officials in charge of the departments interested. Until the year just closed, the Trust Funds, to which attention will be subsequently directed, largely assisted in keeping the account in credit. The position of the main divisions of the General Account on the 30th June, 1906, will be found in the following statement:—

Head of Account.	Ledger Balances on 30th June, 1906.		
	Invested in Securities.	Credit Cash Balances.	Total.
Trust Account—	£	£	£
Government Savings Bank	7,334,681	1,313,926	8,648,607
Special Deposits Account—			
Savings Bank of New South Wales—Deposit Account	....	250,000	250,000
Fixed Deposits Account	....	191,725	191,725
State Debt Commissioners' Trust Account	....	137,782	137,782
Other	336,805	58,417	395,222
	7,671,486	1,951,850	9,623,336
Consolidated Revenue Fund	....	896,124	896,124
	7,671,486	2,847,974	10,519,460
General Loan Account	....	873,021	873,021
	7,671,486	3,720,995	11,392,481
Special Accounts—			
Colonial Treasurer's Supreme Court Moneys Accounts	63,784	311,931	375,715
Advances to Settlers Account	....	8,575	8,575
Ledger Balances on 30th June, 1906......£	7,735,270	4,041,501	11,776,771

The distribution of the cash balance on the 30th June, 1906, is set forth in the following table, the London accounts being shown to the latest date available before the closing of the Public Accounts for the financial year:—

Sydney Balance—30th June, 1906—	£	£	£
Trust Account—Bank of New South Wales	....	1,313,926	
Special Deposits Account—Bank of New South Wales	178,023		
„ „ „ Commercial Banking Company of Sydney (Limited)	459,901		
		637,924	
Consolidated Revenue Account—Bank of New South Wales	346,422		
„ „ „ Commercial Banking Company of Sydney (Limited)	347,683		
„ „ „ Cash in hands of Receiver	202,019		
		896,124	
Special Accounts—Bank of New South Wales		320,506	
General Loan Account—Bank of New South Wales		873,021	
Total Cash in Sydney......£			4,041,501
London Balance at date of latest advices—			
Public Account	Cr. 1,454,025		
Remittances in transit	Cr. 1,550,000		
		Cr. 3,004,025	
Remittance Account—Bank of New South Wales	Dr. 2,605,532		
„ „ Commercial Bank of Sydney (Limited)	Dr. 398,493		
		Dr. 3,004,025	
Total Cash in London......£		....	Nil.
Total......£		....	4,041,501

CONSOLIDATED REVENUE FUND.

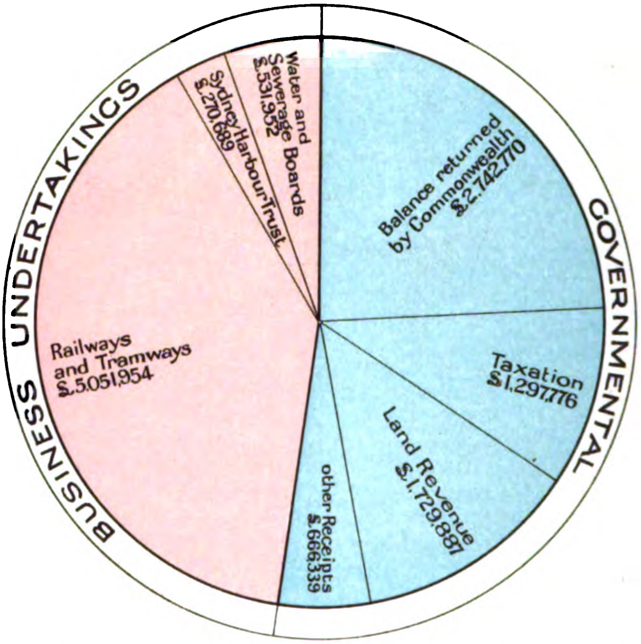
To understand the public accounts of the State, necessitates on the part of the inquirer much patient study and a general knowledge of the financial and political history of the last thirty years; and it was not always possible, even for a well-equipped and patient student, to obtain more than a general idea of the state of the finances during the existence of the old system of account-keeping which came to an end in 1895. Now that the system of keeping accounts on a cash basis is properly in operation, in estimating the financial position of the country, there have still to be considered the Old Deficiency Account, the New Account under the Audit Act Amendment Act, which form the Consolidated Revenue Account, as well as the Loans Account and the various Trust Accounts not forming part of the Consolidated Revenue Account. The Old Deficiency Account properly begins in 1885; but it was only in 1897, when the last obligation under the old system of account-keeping was met, that the position of this account for each year could be accurately stated. Until all obligations had been met, only an approximation could be made, and this depended for its accuracy on the correctness of the Treasurer's estimate of the liabilities outstanding for previous years.

The confusion which has attended the presentation of the public accounts of the State will no longer exist now that operations on the Old Deficiency Accounts have been closed. The following table shows the Accumulated Deficiency on the Consolidated Revenue Account for the period since 31st December, 1884. The Treasury Bills issued under the Treasury Bills Deficiency Act No. 68 of 1900, as amended by No. 8 of 1902, covering the Suspense Accounts (in overdraft) of the General Post Office New Street Resumption Account, 53 Vic. No. 13, the Centennial Park Account, 51 Vic. No. 9, and the Railway Loan Redemption Fund, as applied towards the partial liquidation of the balance of debentures raised under Act 31 Vic. No. 11, together with those issued under Act 30 of 1905, in liquidation of the overdraft of £336,890, have been included in the statement, as under the Act first mentioned the former were made part of the Consolidated Revenue Account proper :—

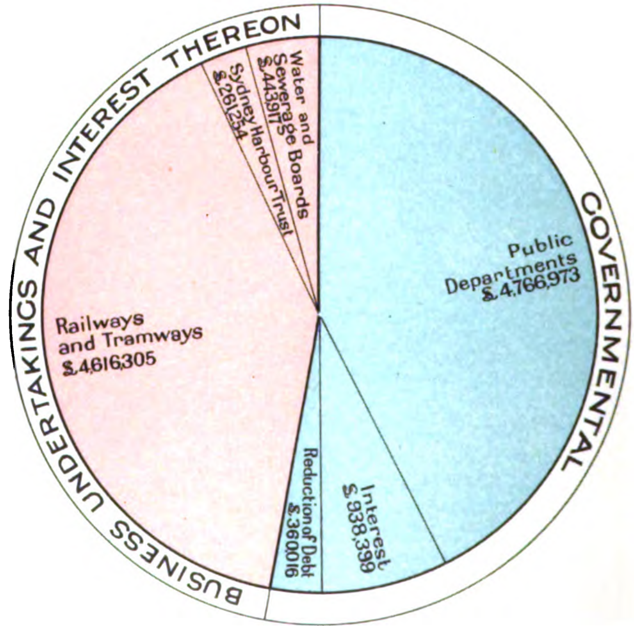
Financial Year.	At the close of each Year.				
	Treasury Bills Current.	Cash.		Suspense Accounts and recoup to Railway Loan Redemption Fund, 53 Vic. No. 24.	Accumulated Deficiency.
		Credit.	Overdraft.		
	£	£	£	£	£
31 December, 1884 ...	....	1,229,338	....	....	....
31 ,, 1885 ...	....	2,900	....	....	....
31 ,, 1886 ...	....	....	1,286,581	....	1,286,581
31 ,, 1887 ...	....	....	2,179,580	....	2,179,580
31 ,, 1888 ...	....	....	1,668,715	....	1,668,715
31 ,, 1889 ...	1,886,100	57,039	....	....	1,829,061
31 ,, 1890 ...	2,352,884	434,259	....	....	1,918,625
31 ,, 1891 ..	2,202,884	....	332,303	....	2,535,187
31 ,, 1892 ...	2,052,884	....	91,585	392,142	2,536,611
31 ,, 1893 ...	1,902,884	....	591,463	319,566	2,813,913
31 ,, 1894 ...	1,752,884	....	464,715	535,024	2,752,623
30 June 1895 ...	1,752,884	....	166,450	667,953	2,587,287
30 ,, 1896 ...	2,622,447	476,530	....	693,610	2,839,527
30 ,, 1897 ...	2,472,447	114,445	....	693,635	3,051,637
30 ,, 1898 ...	2,322,447	122,211	....	843,341	3,043,577
30 ,, 1899 ...	2,172,447	116,523	....	846,468	2,902,392
30 ,, 1900 ...	2,022,447	17,742	....	767,498	2,772,203
30 ,, 1901 ...	1,872,447	....	152,187	755,179	2,779,813
30 ,, 1902 ...	2,477,626	....	236,781	....	2,714,407
30 ,, 1903 ...	2,227,626	....	484,356	....	2,711,982
30 ,, 1904 ...	1,977,626	....	524,064	....	2,501,690
30 ,, 1905 ...	1,727,626	....	336,891	....	2,064,517
30 ,, 1906 ...	1,814,516	896,124	....	....	1,814,516

The deficiency on the 30th June, 1906, on paper, was £918,392, but actually £1,814,516, as only £50,000, which has been transferred to the State Debt and Sinking Fund since the close of the financial year, is available from the surplus in reduction of the deficiency, as the Treasurer proposes to distribute the remainder amongst certain special accounts to be established for the following objects :—Public Works Revenue Fund; Public Works Renewal Fund (Corporate Bodies); and Land Purchase Fund (Closer Settlement). The deficiency is being redeemed at the rate of £250,000 annually, and if future Treasurers contrive to make ends meet it will be eight years before the amount will be wiped off. Besides the sum needed for its redemption, the accumulated deficiency involves interest payments to the extent of £56,435 a year, making the total burthen on present accounts £306,435 per annum.

REVENUE OF THE STATE _ 1905-6
£12,291,367



EXPENDITURE OF THE STATE _ 1905-6
£11,395,243



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Under the "Treasury Bills Deficiency Act, 1905," authority was given for the issue of Treasury Bills to liquidate the overdraft on the Consolidated Revenue. The Act provided that in the event of there being a surplus on the year's transactions of the Consolidated Revenue, the Treasurer shall pay to the State Debts Commissioners the sum of £50,000, with a view to extinguishing the liability of the Bills. Bills to the amount of £336,890 were floated during the last financial year.

REVENUE AND EXPENDITURE.

The first authentic record respecting public finance in the State is dated the 16th October, 1792, and is entitled "An account of the charge and expense of the Civil and Military Establishments in the Settlement of New South Wales, from the first establishment of the Colony to the present time," and shows an expenditure on Civil Establishment of £22,475 5s. 4d., and Military, £44,719 10s. 0¾d. Reliable information respecting the revenue and expenditure dates only from 1815, in which year the public receipts amounted to £21,639, and the expenditure to £19,980. From 1815 to 1840—the latter year being memorable in the annals of the State as that in which transportation ceased—the advance in the revenue was very rapid. In 1840 the public receipts amounted to £683,112—a sum not again reached until 1853, two years after the discovery of gold. From 1853 to 1859 the revenue made great strides, and amounted to £1,522,668 for the year last mentioned. In December, 1859, the separation of Queensland took place, and, consequently, a falling-off in the revenue occurred in the following year, the amount collected being £1,308,925.

The gross and net revenue proper for the years given in the table were as follow :—

Year.	Gross Revenue (exclusive of Advances).	Refunds.	Net Revenue proper.			
			Total.	Per Inhabitant.		
	£	£	£	£	s.	d.
1860	1,308,925	28,209	1,280,716	3	14	9
1865	1,771,162	38,680	1,732,482	4	6	8
1870	2,102,697	52,978	2,049,719	4	3	8
1875	4,121,996	100,360	4,021,636	6	17	7
1880	4,904,230	97,841	4,806,389	6	11	11
1881	6,707,963	156,829	6,551,134	8	11	3
1882	7,410,737	192,151	7,218,586	9	0	10
1883	6,470,341	243,720	6,226,621	7	8	7
1884	7,117,592	280,813	6,836,779	7	14	10
1885	7,587,368	206,817	7,380,551	7	19	2
1886	7,593,050	218,235	7,374,815	7	12	2
1887	8,582,809	205,854	8,376,955	8	6	9
1888	8,886,332	172,148	8,714,184	8	8	2
1889	9,066,941	191,211	8,875,730	8	6	5
1890	9,494,584	188,893	9,305,691	8	8	11
1891	10,036,185	262,853	9,773,332	8	11	2
1892	10,501,104	434,641	10,066,463	8	11	0
1893	9,706,734	206,824	9,499,910	7	17	11
1894	9,507,928	157,877	9,350,051	7	12	5
*1895	4,943,847	79,756	4,864,091	‡3	17	10
†1896	9,270,088	178,720	9,091,368	7	4	1
†1897	9,288,359	179,106	9,109,253	7	2	5
†1898	9,482,092	177,208	9,304,884	7	2	11
†1899	9,754,185	180,770	9,573,415	7	4	8
†1900	10,203,931	230,195	9,973,736	7	8	5
†1901	10,805,543	193,121	10,612,422	7	15	6
†1902	11,178,214	170,858	11,007,356	7	19	7
†1903	11,532,231	236,162	11,296,069	8	0	6
†1904	11,453,745	205,417	11,248,328	7	17	2
†1905	11,514,324	177,406	11,336,918	7	15	2
†1906	12,471,473	188,391	12,283,082	8	4	2

* Six months ended 30th June. † Twelve months ended 30th June.
‡ Amount for six months.

Under the provisions of the Commonwealth of Australia Constitution Act, the control of Customs and Excise and the administration of the Post and Telegraph and Defence Departments were transferred to the Federal Government, the first-named on the 1st January, 1901, and the others on the 1st March, 1901. On the passage of the "Patents Act, 1903," the Patents Office was transferred on the 1st June, 1904. The revenue derived from those sources, since the transfer, has only been included to the extent of the balance paid over to the State after deducting the expenditure incurred in connection with transferred services, and the proportion of other or new expenditure for which the State was liable.

The figures relating to revenue, both above and in subsequent tables, are exclusive of "Advances repaid"; and in dealing with expenditure, "Advances made" have been excluded from consideration, as transactions under these heads do not affect the ordinary revenue and the expenditure therefrom. The terms "net revenue" and "net expenditure," used both here and in subsequent pages, are to be taken as meaning revenue and expenditure freed from the transactions just mentioned as well as from refunds.

The net expenditure for years corresponding with those in the revenue statement is given in the subjoined table, it being assumed that the accounts are on a cash basis—that is, that each year's business is complete within that year. The term used in the table, "Expenditure from revenue of current year," must not be taken in a literal sense, as in only four years during the last decade has the revenue sufficed for the expenditure. This will be seen by comparing the annual expenditure given below with the revenue for the corresponding years shown in the preceding table:—

Year.	Net Expenditure, exclusive of Advances.			Per Inhabitant.		
	From Revenue of current year.	From Accumulated Surplus.	Total.	From Revenue of current year.	From Accumulated Surplus.	Total.
	£	£	£	£ s. d.	£ s. d.	£ s. d.
1860	1,284,568	......	1,284,568	3 15 0	......	3 15 0
1865	1,696,127	......	1,696,127	4 4 10	......	4 4 10
1870	2,550,002	......	2,550,002	5 4 1	......	5 4 1
1875	3,240,964	......	3,240,964	5 10 11	......	5 10 11
1880	5,129,028	331,287	5,460,315	7 0 9	0 9 1	7 9 10
1881	5,218,226	407,523	5,625,749	6 16 5	0 10 8	7 7 1
1882	5,631,499	524,160	6,155,659	7 1 0	0 13 2	7 14 2
1883	6,818,303	732,065	7,550,368	8 2 8	0 17 6	9 0 2
1884	7,531,771	598,426	8,130,197	8 10 7	0 13 7	9 4 2
1885	8,113,510	241,610	8,355,120	8 15 0	0 5 3	9 0 3
1886	8,786,808	72,469	8,859,277	9 1 3	0 1 6	9 2 9
1887	8,976,102	13,815	8,989,917	8 18 8	0 0 4	8 19 0
1888	8,471,755	20,211	8,491,966	8 3 8	0 0 4	8 4 0
1889	8,995,751	5,693	9,001,444	8 8 9	0 0 1	8 8 10
1890	9,385,669	3,677	9,389,346	8 10 3	0 0 1	8 10 4
1891	10,215,820	......	10,215,820	8 18 11	......	8 18 11
1892	10,103,272	......	10,103,272	8 11 8	......	8 11 8
1893	10,082,198	......	10,082,198	8 7 7	......	8 7 7
1894	9,329,353	......	9,329,353	7 12 1	......	7 12 1
*1895	4,844,597	......	4,844,597	‡3 17 5	......	‡3 17 5
†1896	9,698,891	......	9,698,891	7 13 8	......	7 13 8
†1897	9,316,620	......	9,316,620	7 5 9	......	7 5 9
†1898	9,299,411	......	9,299,411	7 2 10	......	7 2 10
†1899	9,562,739	......	9,562,739	7 4 6	......	7 4 6
†1900	10,086,186	......	10,086,186	7 10 1	......	7 10 1
†1901	10,729,741	......	10,729,741	7 17 3	......	7 17 3
†1902	11,008,173	......	11,008,173	7 19 7	......	7 19 7
†1903	11,467,235	......	11,467,235	8 2 11	......	8 2 11
†1904	11,319,888	......	11,319,888	7 18 2	......	7 18 2
†1905	11,195,075	......	11,195,075	7 13 2	......	7 13 2
†1906	11,386,864	......	11,386,864	7 12 3	......	7 12 3

* Six months ended 30th June. † Twelve months ended 30th June. ‡ Amount for six months.

From 1872 to 1877—years notorious for the wholesale alienation of the public estate—the yearly income was considerably in excess of the annual payments, with the result that a large surplus was created. The excess payments of 1878 and 1879 reduced the amount somewhat, but the surpluses of 1881 and 1882 considerably augmented the fund. After the year last mentioned, however, large withdrawals were annually made, and the fund became practically exhausted at the end of 1885. Since that date the existing deficit has been accumulating.

With a view to obtaining a proper conception of the revenue and expenditure of the State, and the sources from which the former is derived, and the objects upon which the latter is expended, the subjoined table has been prepared, covering the last quinquennial period. In the table a separation has been effected between purely governmental receipts and expenditure, and that involved in the business undertakings of the State. The figures are exclusive of advances made and repaid :—

REVENUE AND RECEIPTS.	1901-2.	1902-3.	1903-4.	1904-5.	1905-6.
Governmental—	£	£	£	£	£
Revenue returned by Commonwealth (Braddon Clause)	2,385,905	3,058,133	2,683,417	2,529,070	2,742,770
Taxation—					
Stamp Duties	492,036	473,109	462,570	478,283	580,158
Land Tax	301,981	314,104	322,246	323,267	329,998
Income Tax	190,315	199,159	193,240	195,252	266,233
Licenses	124,433	122,409	122,137	122,606	121,337
Land Revenue—					
Alienation	1,240,032	1,087,087	1,116,061	1,026,594	1,066,741
Occupation	658,654	617,794	629,225	624,048	551,734
Miscellaneous	102,888	100,346	115,284	110,385	114,599
Services rendered (other than Business Undertakings)	323,848	319,179	330,930	320,061	370,762
General Miscellaneous	268,650	265,154	330,088	323,414	284,106
Total Governmental £	6,088,747	6,551,474	6,305,198	6,047,970	6,428,487
Business Undertakings of the State.					
Receipts, Corporate Bodies—					
Railways and Tramways	4,324,432	4,079,788	4,263,744	4,527,368	5,061,963
Sydney Harbour Trust	217,391	256,183	261,659	253,581	270,689
Metropolitan Board of Water Supply and Sewerage	347,710	376,221	385,793	473,562	492,196
Hunter District Water Supply and Sewerage	29,076	32,453	31,934	34,437	39,757
Total Business Undertakings £	4,918,609	4,744,595	4,943,130	5,288,948	5,854,596
Grand Total £	11,007,356	11,296,069	11,248,328	11,336,918	12,283,082

EXPENDITURE.	1901–2.	1902–3.	1903–4.	1904–5.	1905–6.
Governmental—					
Interest on Public Debt and on Funds in temporary possession of the Government, (excluding proportion chargeable to the four corporate bodies)	£ 737,578	£ 896,738	£ [illegible]	£ [illegible]	£ [illegible]
Old-age Pensions and Administration	453,279	553,507	531,983	518,656	519,368
Other Pensions, Retiring Allowances, &c.	44,299	37,589	*131,096	*170,909	*170,685
Parliamentary Electorates and Elections Act, including Electoral Office	27,160	12,710	22,586	42,048	30,464
Parliamentary Allowances and Postage	32,604	35,014	34,746	23,210	29,129
Endowments and Grants—					
Municipalities, including Municipal Rates on Government Buildings	55,516	43,585	46,460	21,172	[illegible]
Fire and Water Brigades	17,517	16,765	22,354	15,790	20,682
Miners' Accident Relief and Administration	9,043	10,329	11,668	11,875	12,747
Hospitals, Benevolent Societies, Coast Hospital and other Charitable Institutions	122,521	114,948	109,779	121,568	142,934
Fire and Flood Relief	132	882	98	5,278	220
Agricultural, Pastoral and Horticultural Societies	15,966	18,071	11,410	14,368	8,936
Public Charities, including Government Asylums, State Children, Aborigines, and Maintenance of Paupers	159,703	167,589	166,148	154,384	149,539
Lunacy, including Master-in-Lunacy	125,436	147,298	133,847	128,062	135,367
Public Instruction, including Reformatories and Grants to Educational and Scientific Institutions	874,692	904,142	912,621	915,586	967,840
Public Works, including Establishment	1,022,968	924,881	770,240	693,657	788,522
Labour and Industry, including Unemployed	13,220	17,414	21,355	11,087	12,821
Extraordinary Services—					
Bubonic Plague	5,235	23,094	5,144	3,456	2,094
Military and Naval Contingents—South Africa and China	49,472	10,847	1,264	194	1,079
Federal Celebrations and Royal Receptions	21,477	514	1,981	......	......
All other Services of the State under Department of Chief Secretary, Treasurer and Secretary for Finance and Trade, Attorney-General and Justice, Lands, and Mines and Agriculture	1,961,519	1,952,191	1,913,964	1,841,548	1,816,518
Total Governmental £	5,749,442	5,882,062	5,684,391	5,576,054	5,705,372
Business Undertakings of the State.					
Railway Commissioners, Sydney Harbour Trust, Metropolitan Board of Water Supply and Sewerage, and Hunter District Water Supply and Sewerage Board—					
Working Expenses	3,002,680	3,169,470	3,132,636	3,131,826	3,184,816
Interest on Capital	†1,981,501	†2,046,289	†2,133,548	2,167,782	2,136,660
Total Business Undertakings £	4,984,181	5,215,759	5,266,184	5,299,608	5,321,476
Sinking Fund Instalments—Total £	274,550	369,413	369,413	319,413	360,016
Grand Total £	11,008,173	11,467,234	11,319,988	11,195,075	11,386,864

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* Includes pensions under Public Service (Superannuation) Act, No. 8 of 1903, 4 per cent. deductions from salaries being paid to Revenue.

† For years 1901-2 to 1903-4; figures for interest on capital are approximate only, as the Capital Debt of the four corporate bodies was not definitely settled.

SOURCES OF REVENUE.

The Revenue is classified under four heads—Taxation, Land Revenue, Receipts for Services Rendered, and General Miscellaneous Receipts. The net revenue falling under each of these four heads, during 1880 and subsequent years, is shown below:—

Year.	Taxation.		Land Revenue.		Receipts for Services rendered.		General Miscellaneous Receipts.	
	Total.	Per Inhabitant.	Total.	Per Inhabitant.	Total.	Per Inhabitant.	Total.	Per Inhabitant.
	£	£ s. d.	£	£ s. d.	£	£ s. d.	£	£ s. d.
1880	1,379,065	1 17 10	1,605,327	2 4 1	1,597,009	2 3 10	224,968	0 6 2
1881	1,789,424	2 5 6	2,724,341	3 11 3	1,944,110	2 10 10	143,259	0 3 8
1882	1,861,663	2 6 8	2,797,470	3 10 1	2,363,781	2 19 2	195,672	0 4 11
1883	1,851,737	2 4 2	1,493,577	1 15 8	2,668,849	3 3 8	212,458	0 5 1
1884	2,100,713	2 7 7	1,579,021	1 15 9	2,980,701	3 6 4	226,344	0 5 2
1885	2,206,429	2 7 7	1,769,616	1 18 2	3,149,998	3 7 11	254,508	0 5 6
1886	2,552,506	2 12 8	1,543,958	1 11 10	3,067,288	3 3 3	211,068	0 4 5
1887	2,583,486	2 11 5	2,312,972	2 6 0	3,220,737	3 4 1	259,760	0 5 3
1888	2,626,027	2 10 8	2,210,688	2 2 8	3,620,242	3 9 11	257,207	0 4 11
1889	2,635,002	2 9 5	2,060,425	1 18 5	3,883,448	3 12 10	306,855	0 5 9
1890	2,704,043	2 9 1	2,158,645	1 19 2	4,138,692	3 15 1	304,311	0 5 6
1891	2,875,028	2 10 4	2,117.003	1 17 1	4,563,483	3 19 11	216,861	0 3 9
1892	3,345,265	2 16 10	1,947,599	1 13 1	4,546,595	3 17 3	227,004	0 3 10
1893	2,777,346	2 6 2	2,115,185	1 15 2	4,379,417	3 12 10	227,462	0 3 9
1894	2,688,693	2 3 10	2,078,751	1 13 11	4,251,666	3 9 3	330,941	0 5 5
*1895	1,288,781	1 0 10	1,037,683	0 16 7	1,997,028	1 11 11	540,599	0 8 6
†1896	2,493,622	1 19 6	1,976,240	1 11 4	4,315,670	3 8 5	305,836	0 4 10
†1897	2,396,412	1 17 6	1,898,834	1 9 9	4,562,541	3 11 4	251,466	0 3 10
†1898	2,511,298	1 18 6	1,976,816	1 10 4	4,610,546	3 10 10	206,224	0 3 3
†1899	2,515,231	1 18 0	1,953,074	1 9 7	4,857,186	3 13 5	247,924	0 3 8
†1900	2,618,069	1 18 11	2,116,076	1 11 5	4,992,521	3 14 4	247,070	0 3 9
†1901	1,980,885	1 9 0	2,066,545	1 10 3	5,316,882	3 17 11	1,248,160	0 18 4
†1902	1,108,770	0 16 1	2,001,574	1 9 0	5,025,066	3 12 10	2,371,946	2 1 8
†1903	1,106,781	0 15 9	1,805,227	1 5 8	4,807,641	3 8 4	3,574,420	2 10 9
†1904	1,100,193	0 15 5	1,860,570	1 6 0	5,012,401	3 10 0	3,275,164	2 5 9
†1905	1,114,408	0 15 3	1,761,027	1 4 1	5,355,418	3 13 4	3,106,065	2 2 6
†1906	1,297,776	0 17 4	1,738,074	1 3 2	5,954,668	3 19 7	3,297,564	2 4 1

* Six months ended 30th June. † Twelve months ended 30th June.

In considering the foregoing figures relating to sources of revenue, it must be borne in mind that the receipts from Customs and Excise are included to the 31st December, 1900, the revenue from Posts and Telegraphs to the 28th February, 1901, and from Patents to the 31st May, 1904, only, when these services were taken over by the Commonwealth Government. For the purpose of comparison with previous years, the receipts from Railways and Tramways and the Metropolitan and Hunter District Water Supply and Sewerage Board are included under the heading "Services rendered," and those from the Sydney Harbour Trust under "General Miscellaneous Receipts." The general miscellaneous receipts, however, for the period 1901 to 1906, include the balance of revenue collected within New South Wales by the Commonwealth Government and returned to the State.

TAXATION.

License Fees, Land and Income Taxes, and Stamp Duties represent the various forms of taxation in force in the State. In the subjoined statement the revenue derived from each source during the period 1904-1906 is shown :—

Head of Revenue.	1904.	1905.	1906.
Indirect Taxation—	£	£	£
Licenses :—			
To retail fermented and spirituous liquors	95,017	95,325	93,116
Other	27,754	27,786	28,797
Total, Licenses	122,771	123,111	121,913
Direct Taxation—			
Income Tax	216,655	231,442	276,299
Land Tax	335,223	332,530	336,785
Total, Land and Income Tax	551,878	563,972	613,084
Stamp Duties :—			
Impressed and adhesive stamps	198,166	211,759	250,747
Probate, administration, and settlement duty	225,115	224,526	293,653
Other	48,121	41,880	45,494
Total, Stamp Duties	471,402	478,165	589,894
Gross Revenue from Taxation	1,146,051	1,165,248	1,324,891
Refunds	45,858	50,840	27,115
Net Revenue from Taxation	1,100,193	1,114,408	1,297,776

The control of Customs and Excise having passed to the Commonwealth Government on the 1st January, 1901, the foregoing statement does not include any figures relating to the taxation thereunder since that date. In a publication of this character, however, it is desirable that the actual amount to which the people of the State are subjected by way of taxation, whether direct or indirect, should be clearly set forth. In the following statement is shown in detail the net revenue derivable from each source of taxation for the decennial period ended 30th June, 1906, after deducting refunds, but not allowing for cost of collection :—

Year ended 30th June.	Indirect Taxation.			Direct Taxation.			Total Taxation.
	Customs.	Excise.	Other.	Income Tax.	Land Tax.	Stamp Duties.	
	£	£	£	£	£	£	£
1897	1,254,677	276,287	116,580	279,753	139,079	330,036	2,396,412
1898	1,247,793	289,479	120,357	172,364	336,036	345,269	2,511,298
1899	1,293,769	315,090	121,186	171,272	253,901	360,013	2,515,231
1900	1,398,105	338,272	120,299	166,051	286,226	309,116	2,618,069
1901	1,574,592	383,752	123,527	205,304	288,369	424,349	2,999,893
1902	2,324,000	488,732	124,438	190,315	301,981	492,036	3,921,502
1903	2,861,710	617,032	122,409	199,159	314,104	473,109	4,587,523
1904	2,604,048	625,738	122,137	193,240	322,246	462,570	4,329,979
1905	2,390,735	642,882	122,606	195,252	323,267	473,283	4,148,025
1906	2,563,552	670,370	121,387	266,233	329,998	580,158	4,531,698

A marked increase in the aggregate amount of taxation is disclosed in the foregoing table, ranging as it does from £2,396,412 in the opening year of the period to £4,531,698 in the closing year. The imposition of uniform customs and excise duties by the Commonwealth Parliament from the 9th October, 1901, largely contributed to this increase; but the revenue derivable from each form of direct taxation shows decided improvement in almost every year. The figures would be incomplete without corresponding information respecting the taxation per head of population, which is set forth hereunder: —

Year ended 30th June.	Indirect Taxation.			Direct Taxation.			Total Taxation.
	Customs.	Excise.	Other.	Income Tax.	Land Tax.	Stamp Duties.	
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1897	0 19 8	0 4 4	0 1 10	0 4 4	0 2 2	0 5 2	1 17 6
1898	0 19 2	0 4 5	0 1 10	0 2 8	0 5 2	0 5 3	1 18 6
1899	0 19 7	0 4 9	0 1 10	0 2 7	0 3 10	0 5 5	1 18 0
1900	1 0 10	0 5 0	0 1 10	0 2 5	0 4 3	0 4 7	1 18 11
1901	1 3 1	0 5 8	0 1 10	0 3 0	0 4 3	0 6 2	2 4 0
1902	1 13 8	0 7 1	0 1 10	0 2 9	0 4 4	0 7 2	2 16 10
1903	2 0 8	0 8 9	0 1 9	0 2 10	0 4 5	0 6 9	3 5 2
1904	1 16 4	0 8 9	0 1 9	0 2 8	0 4 6	0 6 6	3 0 6
1905	1 12 10	0 8 10	0 1 8	0 2 8	0 4 5	0 6 6	2 16 11
1906	1 14 4	0 9 0	0 1 7	0 3 7	0 4 5	0 7 9	3 0 8

The receipts from licenses show very little fluctuation from year to year. The amount received during the year ended 30th June, 1906, under the different heads, was as follows:—

Licenses.	Amount.	Licenses.	Amount.
	£		£
Wholesale spirit dealers	5,830	Gunpowder Act	859
To retail fermented and spirituous liquors, Colonial wine, cider, and perry	93,116	Sale of tobacco and cigars	3,155
		Metropolitan Traffic Act	2,675
		Other	971
Billiard and bagatelle..................	6,817		121,913
Auctioneers	5,223	Refunds..............	526
Hawkers, pedlars, and pawnbrokers	3,267	Total net Receipts ......£	121,387

The receipts by the Mines Department from licenses, and from those issued under the Fisheries Department, are not included in the table.

LAND AND INCOME TAXATION.

The land tax of the State is levied on the unimproved value at the rate of 1d. in the £. A sum of £240 is allowed by way of exemption, and where the unimproved value is in excess of that sum a reduction equal to the exemption is made; but where several blocks of land within the State are held by a person or company, only one amount of £240 may be deducted from the aggregate unimproved value. In cases where land is mortgaged, the mortgagor is permitted to deduct from the tax payable a sum equal to the income-tax paid by the mortgagee on the interest derived from the mortgage of the whole property, including improvements. The lands exempt from taxation comprise Crown lands not subject to the right of purchase, or held under special or conditional lease, or as homestead selections; other lands vested in His Majesty, or His representative; lands vested in the Railway Commissioners; lands belonging to or vested in local authorities; public roads, reserves, parks, cemeteries, and commons; lands occupied as public pounds, or used exclusively for or in connection with public hospitals, benevolent institutions, and other public charities, churches and chapels, the University and its affiliated colleges, the Sydney Grammar School, and mechanics' institutes and schools of art; and lands dedicated to and vested in trustees and used for zoological, agricultural, pastoral, or horticultural show purposes, or for other public or scientific purposes. In the event of the tax remaining unpaid for a period of two years after it has become due, on giving another year's notice, the Commissioners may lease the land for a period not exceeding three years, or, with the sanction of a Judge of the Supreme Court, sell so much of it as may be necessary to meet the payment of the tax, with fines, costs, and expenses in addition.

Under the "Local Government (Shires) Act, 1905," when the Council of a shire makes and levies a general rate of not less than 1d. in the £ on the unimproved value of land within the shire, land tax ceases to be collected by the State within the area, and a similar provision is inserted in the Local Government Extension Act with regard to existing municipalities, other than the City of Sydney.

The aggregate unimproved value of the land of the State assessed for taxation purposes is estimated to be about £129,000,000, but consequent on no detail statistics being available, it is impossible to state the actual taxable value; the deductions allowed by way of mortgage; balance of conditional purchases outstanding; and the general exemption of £240 allowed by law. The number of persons owning land in the State is about 186,801, but by reason of the deduction referred to the actual number of taxpayers is 42,801.

An income-tax of 6d. in the £ is imposed upon so much of every income as may be in excess of £200, except in so far as it is derived from the ownership or use or cultivation of land upon which land-tax is payable. The exemptions include the revenues of local authorities, the income of life assurance societies, and of other societies and companies not carrying on business for purposes of profit or gain, and not being income derived from mortgages; the dividends and profits of the Savings Bank of New South Wales and the Government Savings Bank; the funds and income of registered friendly societies and trades unions; the incomes and revenues of all ecclesiastical, charitable, and educational institutions of a public character; and income accruing to foreign investors from Government Stock. The regulations provide that, in the case of every company, its income shall be taken as the income of the company in New South Wales and from investments in the State. Public companies are not allowed the exemption of £200.

There is no great variation either in regard to the number or amount of incomes liable to taxation, as shown in the following table, which relates to the last eight years:—

Year.	Number of Incomes.	Net Income.
		£
1899	19,775	11,123,343
1900	20,051	12,140,569
1901	19,991	12,065,842
1902	20,299	12,127,129
1903	22,234	13,415,760
1904	22,299	12,482,094
1905	22,814	13,769,828
1906	23,832	14,937,906

A distribution of the incomes subject to taxation according to the amounts taxable is set forth in the following statement, the particulars representing an average of eight years. These, however, represent only a proportion of the incomes derived from New South Wales, as incomes derived from land, or the use and occupancy of land, are not taxable. The net earnings are given in the table:—

Categories.	Average of Eight Years.		Percentage in each category.	
	Number of Incomes.	Amount of Incomes.	Of Number of Incomes.	Of Amount of Incomes.
		£	per cent.	per cent.
£200 and under £250...	6,311	1,410,845	29·77	11·23
250 „ 300...	4,048	1,101,054	19·09	8·76
300 „ 400...	4,092	1,400,449	19·30	11·15
400 „ 500...	1,963	877,475	9·26	6·98
500 „ 700...	1,901	1,098,723	8·97	8·74
700 „ 1,000...	1,174	963,221	5·54	7·66
1,000 „ 1,200...	388	423,497	1·82	3·37
1,200 „ 2,000...	687	1,037,986	3·24	8·26
2,000 „ 5,000...	447	1,308,207	2·11	10·41
5,000 „ 10,000...	118	787,053	0·55	6·26
10,000 „ 20,000...	45	609,099	0·21	4·85
20,000 and upwards	29	1,549,064	0·14	12·33
Total	21,203	12,566,673	100·00	100·00

The revenue from land and income taxes since 1896, the year in which they were first imposed, is shown hereunder. The amounts exclude refunds rendered necessary through correction of errors by the taxpayer or adjustments by the Department, but include refunds brought about through the income of the year of assessment falling short of the amount of income of the preceding year on which the assessment was made; a provision which was repealed by the "Land and Income Tax Amendment Act, 1904":—

Year.	Land Tax.	Income Tax.
	£	£
1896	....	27,658
1897	139,079	295,537
1898	364,131	166,395
1899	253,901	178,032
1900	286,227	183,460
1901	288,369	215,893
1902	301,981	203,625
1903	314,104	214,686
1904	322,246	211,831
1905	323,267	195,252
1906	329,998	266,233

The fluctuations shown in the first three years are due to the difficulties inseparable from the introduction of a system of direct taxation; the returns for 1899 and subsequent years, however, are under normal conditions.

Probate and Succession Duties.

In this State, up to the end of the year 1899, a duty of 1 per cent. was payable on the value of the real and personal estate of a testator or intestate, and on settlements of property taking effect after death, provided the value of the property was less than £5,000; 2 per cent. was payable on estates of the value of £5,000 and under £12,500; 3 per cent. upon £12,500 and under £25,000; 4 per cent. upon £25,000 and under £50,000; and 5 per cent. upon £50,000 and upwards. Estates not exceeding £200 in gross value were exempt from duty. On the 22nd

December, 1899, an amending Act was assented to, under which the following duties on the estates of deceased persons are now payable:—

Exceeding—	Not exceeding—	Rate.	Exceeding—	Not exceeding—	Rate.
£	£	per cent.	£	£	per cent.
......	1,000	Nil.	34,000	36,000	6⅖
1,000	5,000	2	36,000	38,000	6⅗
5,000	6,000	3	38,000	40,000	6⅘
6,000	7,000	3⅕	40,000	44,000	7
7,000	8,000	5⅖	44,000	48,000	7⅕
8,000	9,000	3⅗	48,000	52,000	7⅖
9,000	10,000	3⅘	52,000	56,000	7⅗
10,000	12,000	4	56,000	60,000	7⅘
12.000	14,000	4⅕	60,000	64,000	8
14,000	16,000	4⅖	64,000	68,000	8⅕
16,000	18,000	4⅗	68,000	72,000	8⅖
18,000	20,000	4⅘	72,000	76,000	8⅗
20,000	22,000	5	76,000	80,000	8⅘
22,000	24,000	5⅕	80,000	84,000	9
24,000	26,000	5⅖	84,000	88,000	9⅕
26,000	28,000	5⅗	88,000	92,000	9⅖
28,000	30,000	5⅘	92,000	96,000	9⅗
30,000	32,000	6	96,000	100,000	9⅘
32,000	34,000	6⅕	100,000	....	10

Only one-half of these rates is payable on the net amount received by the widow, children, and grand-children of the testator or intestate, provided the total value of the estate is not more than £30,000 after all debts have been paid.

Under the Companies (Death Duties) Act of 1901, in the case of the death of the member of a company incorporated according to the laws of any country, possession, or place other than New South Wales, and carrying on the business of mining for any mineral, or of pastoral or agricultural production, or timber-getting in New South Wales, wherever such member may have been domiciled, duty is chargeable as shown in the foregoing table.

By the Stamp Duties (Deductions) Act, 1904, where duty is payable in the United Kingdom, by reason of a death occurring after the 29th December, 1904, in respect of any property situated therein, and passing on such death, the Commissioner is empowered to make an allowance of a sum equal to the amount of duty to be deducted from that payable in respect of the property under the various Acts operating in this State.

COMPOSITION DUTY.

The Bank Notes Act of 1893 provided for the increase of the annual composition duty on bank notes from 2 to 2½ per cent., on all notes issued within the State. As the Act mentioned lapsed in November, 1895, the composition charged since that date has been at the old rate.

LAND REVENUE.

The receipts from the sale and occupation of Crown land are treated as public income in this State, a practice that also obtains in the other States of Australia. While the proceeds from occupation, being rent, can be reasonably regarded as an item of revenue, the inclusion of the proceeds of auction, conditional purchase, and other classes of sale in the ordinary revenue is open to serious objection. It has been urged in justification of the course that the sums so obtained have enabled the

Government either to construct works, which both enhance the value of the remaining public lands and facilitate settlement, or to endow municipalities, and thus enable them to carry out local works.

The revenue derived from lands may be grouped under three main heads—(*a*) auction sales and other forms of unconditional sale; (*b*) conditional sales or lands disposed of under the system of deferred payments; (*c*) rents from pastoral, mining, and other classes of occupation. The first two sources have been amalgamated under the head of Alienation; while the last is classed as Occupation.

More than half the annual receipts from land are obtained from alienation, as will be seen from the following table, which gives in detail the revenue from 1904 to 1906, but as about 40 per cent. of the amounts shown as instalments and interest represents interest on balances of conditional purchases outstanding, to that extent the receipts from sales may be legitimately viewed as income:—

Head of Revenue.	1904.	1905.	1906.
Alienation—			
Sales, etc. :—	£	£	£
Auction sales	109,554	91,331	82,953
Other	7,964	10,985	12,629
Total	117,518	102,316	95,582
Conditional Purchases :—			
Deposits and improvements	56,326	62,975	58,320
Instalments and interest	759,650	728,856	709,003
Interest (under Act of 1861)	48,480	38,543	32,068
Balances	112,012	75,861	145,691
Homestead Selections	37,483	50,272	57,917
Total	1.013.951	956.507	1.002.999
Total, Alienation	1,131,469	1,058,823	1,098.581
Occupation—			
Pastoral :—			
Pastoral leases	2,662	2,639	2,974
Conditional leases	175,404	178,456	193,557
Occupation licenses	86,090	70,712	55,444
Homestead leases	10,183	6,172	4,027
Annual leases	43,098	43,820	45,075
Settlement leases	72,727	79,971	87,763
Improvement leases	68,989	60,445	61,376
Western Land Division leases	141,707	133,443	31,544
Other leases	10,634	13,213	16.715
Total	611,494	588,871	498,475
Mining :—			
Mineral leases	16.949	13,871	17,886
Leases of auriferous lands	7,389	7,149	6,766
Miners' rights	3,518	3,553	3,700
Royalty on minerals	29,536	36,408	46,272
Other	6,870	7,251	12,984
Total	64.262	68.232	87,608
Total, Occupation	675,756	657,103	586,083
Miscellaneous Land Receipts—			
Survey fees	44,394	49,332	46,797
Rents, special objects	21,444	23,301	24,871
Timber licenses, royalty, etc.	33,932	33,023	40,710
Quit rents and other receipts	28,966	23,885	23,558
Total	128,736	129,541	135,936
Gross Revenue from Lands	1,935,961	1,845,467	1,820,600
Refunds	75,391	84,440	87,526
Net Revenue from Lands	1,860,570	1,761,027	1,733,074

The revenue from the public lands has fluctuated considerably since the passing of the Crown Lands Alienation Act of 1861. The minimum amount of revenue was received in 1864, and amounted to £297,866, or 15s. 6d. per head of population. As indicated in another portion of this work, the struggle between the selector and squatter did not begin in earnest until about the year 1873, when the effect of the legislation of 1861 was felt in an acute form, and during the decennial period following the pastoral tenants availed themselves to the full extent of the system of auction sales to protect their possessions from encroachment through the operations of selectors. As a consequence, the land receipts for these years were considerably inflated, and in 1877 a sum of £3,236,277, or £5 2s. 11d. per inhabitant was received—the highest ever recorded. The Act of 1884 had the effect of limiting the gamble in land, and improved the condition of the pastoralist by granting him fixity of tenure over one-half of his run for a term of years; the leases were, however, appraised at a higher rent, and, consequently, the revenue therefrom increased in the subsequent years. The revenue from land sales has declined year by year, both absolutely and as compared with population. The revenue from this source is now some £1,338,000 less than was the case in 1881. In regard to occupation, a different condition of things is disclosed; the receipts in 1905-6 totalled £675,222, or an increase of £337,572 as compared with 1881.

The gross revenue derived from alienation and occupation, and the gross and net land revenue, from 1880 to 1906, were as follow:—

Year.	Alienation.		Occupation.		Gross Revenue from Lands.	Refunds.	Net Revenue from Lands.
	Sales, etc.	Conditional Purchases. ‡	Pastoral. §	Mining, etc. ‖			
	£	£	£	£	£	£	£
1880	731,353	650,674	237,660	26,749	1,646,436	41,109	1,605,327
1881	1,415,460	1,067,879	309,170	28,480	2,820,989	96,648	2,724,341
1882	1,306,300	1,148,741	430,417	28,936	2,914,394	116,924	2,797,470
1883	338,234	931,235	358,957	27,643	1,656,069	162,492	1,493,577
1884	411,202	952,281	344,096	45,765	1,753,344	174,323	1,579,021
1885	535,508	778,849	517,156	44,939	1,876,452	106,836	1,769,616
1886	375,458	830,965	391,749	45,846	1,644,018	100,060	1,543,958
1887	349,585	872,192	1,100,423	56,795	2,378,995	66,023	2,312,972
1888	316,034	896,249	941,521	114,449	2,268,253	57,615	2,210,638
1889	214,691	934,480	917,491	70,901	2,137,563	87,138	2,050,425
1890	225,387	1,153,377	785,116	79,159	2,243,039	84,394	2,158,645
1891	191,696	1,154,979	848,960	71,001	2,266,636	149,633	2,117,003
1892	224,164	1,015,175	915,378	59,345	2,214,062	266,463	1,947,599
1893	252,782	1,044,710	849,652	59,123	2,206,267	91,082	2,115,185
1894	234,408	1,052,198	789,278	49,291	2,125,175	46,424	2,078,751
*1895	36,378	852,823	139,219	24,932	1,053,352	15,669	1,037,683
†1896	67,896	1,093,138	800,921	55,781	2,017,736	41,496	1,976,240
†1897	68,599	1,082,516	748,779	53,535	1,953,429	54,595	1,898,834
†1898	99,392	1,150,060	725,279	56,870	2,031,601	54,785	1,976,816
†1899	108,960	1,140,240	702,123	58,187	2,009,510	56,436	1,953,074
†1900	127,829	1,227,870	737,114	88,153	2,180,966	64,890	2,116,076
†1901	135,046	1,234,172	679,315	74,830	2,123,363	56,818	2,066,545
†1902	120,202	1,173,090	694,099	70,286	2,057,677	56,103	2,001,574
†1903	119,770	1,008,998	658,696	83,227	1,870,691	65,464	1,805,227
†1904	117,518	1,058,345	661,904	98,194	1,935,961	75,391	1,860,570
†1905	102,316	1,005,839	636,057	101,255	1,845,467	84,440	1,761,027
†1906	95,582	1,049,796	546,904	128,318	1,820,600	87,526	1,733,074

* Six months ended 30th June. † Twelve months ended 30th June. ‡ Includes Survey Fees. § Includes all Miscellaneous Receipts except Survey Fees and Timber Licenses. ‖ Includes Timber Licenses.

The land policy of the State, though largely connected with its finances, has been more fully discussed in the part of this work dealing with land settlement. It may here be sufficient to say that the large revenue obtained from the sale of Crown lands during the years preceding 1883 was not due to the demand created by the normal progress of settlement, but was the outcome of an unhealthy rivalry between the two principal classes of settlers—the pastoral tenants and the free selectors. The estate of the country was being parted with without any conditions as to improvements or settlement; and as the great object of land sales was not so much to obtain revenue as to promote settlement, under the Act of 1884, it was decided to sell by auction only a limited area (200,000 acres) during any one year. To this determination is to be attributed the falling-off in the revenue under the head of sales for the subsequent years.

The reappraisement of the leases in the Western Division, under the provisions of the Western Lands Act, was responsible for a considerable shrinkage in revenue, the rentals of the leases determined to the 30th June, 1906, showing a reduction of £117,507 over those previously in force. It was obvious that radical reductions were necessary to prevent enormous tracts of country being abandoned, and thus becoming worse than non-productive, inasmuch as they would become breeding-grounds for rabbits and other noxious animals. The loss of revenue, however, will be counterbalanced by the benefit resulting from the occupation of this large territory, under conditions which will encourage energy and the expenditure of capital in the proper development of the country, and in effectually coping with the rabbit scourge.

RECEIPTS FOR SERVICES RENDERED.

The receipts from the Railways and Tramways and from Water Supply and Sewerage comprise the greater part of the revenue received from services, the balance under this heading being made up chiefly of dues and fees of various kinds. On the 1st March, 1901, the control of the Posts and Telegraphs was taken over by the Commonwealth Government, and the transactions of that Department are, therefore, not included in the statement immediately following.

While the total revenue has considerably increased of late years, the expenditure has grown similarly, and the figures given are hence not altogether an indication of progress. After making provision for working expenses and interest on loan capital, the Railways and Tramways, during the financial year just closed, exhibited a surplus of £455,894, while the operations of the Metropolitan Board of Water Supply and Sewerage and the Hunter District Water Supply and Sewerage Board show a surplus of £66,487 and £15,559 respectively. The gross receipts under each head during the period 1904-6 were as follow:—

Service.	1904.	1905.	1906.
	£	£	£
Railways	3,515,364	3,738,802	4,259,520
Tramways	806,798	817,739	854,977
Water Supply and Sewerage—			
Metropolitan—Water Supply	228,631	265,980	272,693
Sewerage	157,522	213,492	220,313
Hunter District Water Supply	31,934	34,468	39,806
Public school fees	83,538	82,612	78,445
Pilotage, harbour and light rates, and fees	76,458	71,137	82,526
Mint receipts	22,205	20,123	20,482
Miscellaneous services	149,541	146,840	189,906
Gross revenue from Services	5,071,991	5,391,193	6,018,668
Refunds	59,590	35,775	64,000
Net revenue from Services	5,012,401	5,355,418	5,954,668

The gross revenue derived annually from each of the principal services, and the net revenue from all sources, from 1880 to 1906, were as shown in the following statement:—

Year.	Railways and Tramways.	Posts and Telegraphs.	Water Supply and Sewerage (Metropolitan and Hunter).	Other Services.	Gross Revenue from Services.	Refunds.	Net Revenue from Services.
	£	£	£	£	£	£	£
1880	1,189,564	286,134	......	129,758	1,605,456	8,447	1,597,009
1881	1,459,684	330,414	......	168,755	1,958,853	14,743	1,944,110
1882	1,828,094	358,525	......	192,624	2,379,243	15,462	2,363,781
1883	2,081,128	403,794	......	200,972	2,685,894	17,045	2,668,849
1884	2,302,013	442,964	......	218,092	2,963,069	32,368	2,930,701
1885	2,492,691	472,564	......	224,391	3,189,646	39,648	3,149,998
1886	2,389,062	486,210	......	234,671	3,109,943	42,655	3,067,288
1887	2,510,335	524,298	......	230,242	3,264,875	44,138	3,220,737
1888	2,759,280	562,909	90,089	261,276	3,673,554	53,312	3,620,242
1889	2,875,135	597,988	147,071	318,884	3,939,078	55,630	3,883,448
1890	3,013,921	629,894	232,519	310,765	4,187,099	48,407	4,138,692
1891	3,439,283	648,553	245,821	287,198	4,620,855	57,422	4,563,433
1892	3,416,496	650,635	255,641	281,841	4,604,613	58,018	4,546,595
1893	3,253,272	643,849	275,954	257,267	4,430,342	50,925	4,379,417
1894	3,148,720	626,864	275,835	248,451	4,299,870	48,204	4,251,666
*1895	1,454,973	316,888	135,989	116,739	2,024,589	27,561	1,997,028
†1896	3,156,527	676,668	270,376	267,670	4,371,241	55,571	4,315,670
†1897	3,367,552	706,120	281,511	260,885	4,616,068	53,527	4,562,541
†1898	3,368,921	734,759	293,929	257,223	4,654,832	44,286	4,610,546
†1899	3,568,658	775,102	322,244	267,269	4,933,273	76,087	4,857,186
†1900	3,640,450	819,460	350,897	278,970	5,089,777	97,256	4,992,521
†1901	4,158,016	580,539	355,441	306,747	5,400,743	83,911	5,316,832
†1902	4,390,951	......	377,019	324,661	5,092,631	67,565	5,025,066
†1903	4,197,789	......	409,019	320,008	4,926,816	119,175	4,807,641
†1904	4,322,162	......	418,087	331,742	5,071,991	59,590	5,012,401
†1905	4,556,541	......	513,940	320,712	5,391,193	35,775	5,355,418
†1906	5,114,497	......	532,812	371,359	6,018,668	64,000	5,954,668

* Six months ended 30th June. † Year ended 30th June.

The net revenue just given should be read with the rates per inhabitant for the same years, which will be found on page 605. The income derived by the Government from services has, with little interruption, been steadily increasing; this, however, is only what would naturally be expected in a growing community, but it is satisfactory to be able to record that the income, compared with the population, has also been fairly well sustained, the check since 1892 being accounted for by the general depression. It will be seen from the table on page 605 that, notwithstanding the transfer of the Post and Telegraph Department to Federal control on the 1st March, 1901, the rate per head in 1905-6 was £3 19s. 7d.; in 1888, £3 9s. 11d.; and in 1880, £2 3s. 10d. The increase in the return from services is undoubtedly largely due to the construction of railways and tramways, from which nearly 85 per cent. of such revenue was derived during 1905-6. Compared with the population, the value of the production of the State is enormous; but as much of this production is due to the largeness of the territory, and not directly to the labours of those who occupy it, its value will, under present conditions, cease to increase at the same rate as does the population; and, moreover, as the revenue from services naturally depends upon the amount of production, the rate per inhabitant will not only cease to increase, but will ultimately decline.

With the exception of 84½ miles of private railways, and 6¾ miles of private tramways, the services under these heads are those of State administration. According to a statement in the Auditor-General's Report for 1891, the Railway service yielded a small net profit, after all expenses had been met, in 1881 and 1882. Since that time, however, with the exception of the years ended 30th June, 1899, 1901, and 1906, the Railways have been worked at a loss. A proper comparison between earnings and expenditure can only be obtained by taking into consideration the fact that the average price obtained for the loans of the State was 96·67 per £100 of stock.

It will be noticed that during 1905-6 the revenue from both services increased, and while the expenditure as a consequence increased, there was a surplus on the year's transactions of £2,079,481 to meet interest obligations on loan capital amounting to £1,643,832. The Tramways in 1888 paid only 1·98 per cent.; in 1892 and 1893 the net profit equalled 5·28 and 5·51 per cent. respectively; while in 1894 it declined to 4·07 per cent., and for the year ended June, 1906, the net return equalled 5·08 per cent. on the loan capital. The questions of Railway and Tramway earnings and expenditure are dealt with at length in another chapter.

The collections under the head of Water Supply and Sewerage include the returns of the Boards operating in the metropolitan area and in the Hunter River district. These Boards form part of the local government scheme, and it is an open question whether the receipts and expenditure connected with them should be included in the general account. The loans from which the works have been constructed, however, form part of the public debt; and the interest payable is, therefore, rightly included as an item of the general accounts.

The Metropolitan Board was established in 1888, and the Hunter District Board in 1892. The operations of the Boards are more fully dealt with in the chapter dealing with Local Government.

The balance of the revenue collected under the head of services consists of fees of office, public school fees, pilotage and harbour dues, and other items. The revenue derived from these services, however, is merely nominal, as the cost of the work performed in nearly every case far exceeds the receipts. The gross amount received under each head during the year ended 30th June, 1906, was:—

	£
Fees of office	122,547
Public school fees	78,445
Pilotage and harbour dues	82,526
Other fees	87,841
Total	£371,359

GENERAL MISCELLANEOUS RECEIPTS.

All items which cannot rightly be placed under one of the three great classes are grouped under the heading of "General Miscellaneous Receipts," the chief of which are "Rents, exclusive of land," "Forfeitures," "Balances, Transfers, and Repayments," and similar accounts. For the last six years also the figures include collections in connection with the Sydney Harbour Trust and the Darling Harbour resumptions, as well as balances of revenue collected by the Commonwealth and returned to the State. The gross amount received under each of the main sub-heads, and the gross and net revenue received under the general head, for 1880 and subsequent years, are shown in the following statement: —

Year.	Rents, exclusive of Land.	Forfeitures.	Balances, Transfers, and Repayments.	Other Miscellaneous Receipts.	Gross Revenue from Miscellaneous Receipts.	Refunds.	Net Revenue from General Miscellaneous Receipts.
	£	£	£	£	£	£	£
1880	37,337	997	55,048	141,662	235,044	10,056	224,988
1881	53,785	638	19,588	83,262	157,273	14,014	143,259
1882	55,476	914	60,586	96,711	213,687	18,015	195,672
1883	45,781	636	64,686	125,567	236,670	24,212	212,458
1884	53,165	918	48,477	145,744	248,324	21,980	226,344
1885	51,040	1,042	68,660	147,877	268,619	14,111	254,508
1886	49,228	833	60,180	117,026	227,267	16,204	211,063
1887	49,498	983	61,427	162,483	274,391	14,631	259,760
1888	62,194	1,043	53,016	146,389	262,642	5,435	257,207
1889	64,336	556	110,839	137,400	313,131	6,276	306,855
1890	52,741	1,035	68,090	194,241	316,107	11,796	304,311
1891	67,622	1,557	44,481	118,690	232,350	14,482	217,868
1892	96,021	2,238	36,502	97,881	232,642	5,638	227,004
1893	84,819	2,892	54,669	93,179	235,559	8,097	227,462
1894	78,215	1,747	87,382	169,839	337,183	6,242	330,941
*1895	40,899	1,119	35,743	465,860	543,621	3,022	540,599
†1896	86,193	5,249	116,263	107,290	314,995	9,159	305,836
†1897	88,471	3,660	65,799	102,858	260,788	9,322	251,466
†1898	90,029	2,121	29,952	102,575	224,677	18,453	206,224
†1899	93,394	1,189	32,131	124,986	251,700	3,776	247,924
†1900	80,739	1,606	44,112	129,980	256,437	9,367	247,070
†1901	227,774	688	57,625	981,864	1,267,951	19,791	1,248,160
†1902	303,732	1,200	58,053	2,515,978	2,878,963	7,017	2,871,946
†1903	344,456	742	51,655	3,192,639	3,589,492	15,072	3,574,420
†1904	345,610	623	112,610	2,840,898	3,299,741	24,577	3,275,164
†1905	339,219	10,542	97,583	2,665,072	3,112,416	6,351	3,106,065
†1906	344,445	561	99,534	2,862,772	3,307,312	9,748	3,297,564

* Six months ended 30th June. † Twelve months ended 30th June.

The figures for the last five years include balance of revenue collected within the State by the Commonwealth and returned to the State Government, the amounts for each year being as follow:—In 1901, £883,273; in 1902, £2,385,905; in 1903, £3,053,133; in 1904, £2,683,417; in 1905, £2,529,070; and in 1906, £2,742,770.

The sudden increase in 1901 under the heading of "Rents exclusive of Land" is due to the inclusion of the collections in connection with the Sydney Harbour Trust and the Darling Harbour resumptions. In the same year also, under "Other Miscellaneous Receipts," balances of revenue returned to the State by the Commonwealth appear for the first time.

HEADS OF EXPENDITURE.

The following table gives the net expenditure under the more important heads for each financial year since 1880. The amounts given herewith, as well as those shown on page 602, are exclusive of transactions under

"Advances made," which, as mentioned previously, are not items of expenditure in the proper sense of the term:—

Year.	Net Expenditure on—						
	Railways and Tramways.	Post and Telegraphs.	Water Supply and Sewerage (Metropolitan and Hunter).	Public Instruction.	Interest on Public Debt (Funded and Unfunded).	Other Services.	Total Net Expenditure.
	£	£	£	£	£	£	£
1880	790,686	387,147	......	400,740	685,094	3,196,648	5,460,315
1881	730,181	406,473	......	587,578	685,639	3,215,878	5,625,749
1882	1,015,803	429,930	......	623,701	766,398	3,319,827	6,155,659
1883	1,425,800	489,013	......	737,969	834,145	4,063,441	7,550,368
1884	1,558,955	525,001	......	827,290	1,012,322	4,206,629	8,130,197
1885	1,689,917	557,096	......	762,599	1,262,684	4,082,824	8,355,120
1886	1,670,170	591,058	......	751,021	1,549,679	4,297,349	8,859,277
1887	1,658,724	613,354	......	728,835	1,643,522	4,345,482	8,989,917
1888	1,781,876	593,437	16,536	683,883	1,702,595	3,713,639	8,491,966
1889	1,768,474	604,370	38,168	707,211	1,760,274	4,122,947	9,001,444
1890	2,013,451	625,015	61,282	727,910	1,857,656	4,100,355	9,385,669
1891	2,363,032	694,732	69,562	770,813	1,874,616	4,443,065	10,215,820
1892	2,150,220	759,017	80,787	857,243	1,714,627	4,541,378	10,103,272
1893	1,891,049	774,495	83,931	803,020	2,425,987	4,103,716	10,082,198
1894	1,741,821	750,196	79,292	742,411	2,255,244	3,760,389	9,329,353
*1895	881,520	394,298	42,201	391,339	1,133,566	2,001,673	4,844,597
†1896	1,877,543	745,343	75,800	763,664	2,262,996	3,973,545	9,698,891
†1897	1,827,150	706,144	80,526	716,539	2,267,861	3,718,400	9,316,620
†1898	1,865,776	701,054	81,322	717,243	2,255,690	3,678,326	9,299,411
†1899	1,983,987	695,262	90,097	749,865	2,292,955	3,750,573	9,562,739
†1900	2,102,793	726,569	89,627	769,572	2,310,271	4,087,354	10,086,186
†1901	2,474,376	527,254	98,921	785,279	2,346,852	4,497,059	10,729,741
†1902	2,806,161	......	115,193	856,622	2,498,750	4,731,447	11,008,173
†1903	2,948,554	......	126,432	899,918	2,619,766	4,872,565	11,467,235
†1904	2,921,026	......	121,570	905,975	2,745,348	4,625,969	11,319,888
†1905	2,917,702	......	136,279	912,832	2,856,872	4,371,390	11,195,075
†1906	2,972,473	......	132,039	928,884	2,941,059	4,412,409	11,386,864

* Six months ended 30th June. † Twelve months ended 30th June.

It will be noticed that the annual expenditure for the services named has, generally speaking, increased; the revenue has likewise grown, but not in a corresponding ratio. To establish the relative position of each, it will be necessary to place the accounts side by side. The figures given for the public debt apply only to interest expenditure; the amount paid for redemptions, which in point of volume is unimportant, and the expenditure incurred in the management and inscription of stock in London, including the payment of dividends, are included under the head of "Other Services." The falling-off in the expenses of the public debt in 1892 was due to the non-inclusion of the sum of £288,750 paid in London during September of that year. The advice of this was received by the Treasury too late to admit of the amount being charged to the year mentioned, and the expenditure for 1893 was in consequence correspondingly increased.

EXPENSES OF GENERAL GOVERNMENT.

In the figures already given regarding the revenue of the State, it will have been noticed that the amount received on account of the business undertakings of the State—that is, the earnings of the railways, the tramways, the boards of water supply and sewerage, and the Sydney Harbour Trust—are included in the general revenue. This is almost a matter of necessity so long as the expenditure includes interest on the public debt incurred to promote these services. In consequence of this system the annual cost of maintaining the services referred to is also included in the expenditure. The figures given in the table above do not admit of a ready distinction being made between these two kinds of expenditure; but as the information is necessary for the right understanding of the public accounts, the following statement has been compiled. It shows the progress of expenditure as classified under two headings—ordinary expenditure of general government, including interest on capital liability of services connected therewith; and expenditure on services practically outside the administration of general government, such as railways, tramways, water supply and sewerage, and the Sydney Harbour Trust, and the interest on capital liability of the services enumerated. The figures for the five years ended 30th June, 1906, and the rates per inhabitant, are as follow:—

Year ended 30th June.	Net Expenditure.			
	Governmental.		Business Undertakings.	
	Total.	Per Inhabitant.	Total.	Per Inhabitant.
	£	£ s. d.	£	£ s. d.
1902	6,023,992	4 7 4	4,984,181	3 12 3
1903	6,251,475	4 8 10	5,215,759	3 14 1
1904	6,053,704	4 4 7	5,266,184	3 13 7
1905	5,895,467	4 0 8	5,299,608	3 12 6
1906	6,065,388	4 1 1	5,321,476	3 11 2

Under the heading of the expenses of general government are included civil and legal expenditure, and the cost of Education and such public works as are constructed out of the ordinary revenue, as also the interest payable where the proceeds of loans have been used to defray the cost of their construction, together with the sinking fund instalments. The expenditure per head of population on account of some of these services, viz., educational and others of less importance, has either been stationary or declining.

The general tendency in progressive communities is for the cost of government per inhabitant to decline as population increases; the operation of this law is traceable in the figures just given. During the period embraced in the statement, the cost of government has varied between £4 0s. 8d. and £4 8s. 10d., the year with the least expenditure per inhabitant being that ended June, 1905, and that with the highest, 1903. The position of the State as the constructor of small local works prevents that decrease in the expenses of general government which is so desirable, and the absence of a law placing the responsibility upon the district concerned has necessitated the expenditure of large sums upon works only locally important and not strictly chargeable to the public revenue. The figures just given show that the actual cost of government is materially less than would appear from the returns of ordinary revenue and expenditure.

TRUST FUNDS AND SPECIAL DEPOSITS.

The Trust Funds and Special Deposits form a very important division of the public finances, not only from the nature of the transactions and the volume of accumulated funds, but also by reason of the manner in which the accounts are operated upon in conjunction with the general finances of the State. To show the growing importance of the Account, the following table has been compiled. In 1871 the amount at credit was

£213,340; in 1881, £1,671,183; in 1891, £4,997,055; in 1901, £10,823,128; and the sum held in trust is still over ten millions:—

Year.	Amount.	Year.	Amount.	Year.	Amount.
	£		£		£
1871	213,340	1883	2,200,896	*1895	7,025,660
1872	321,766	1884	2,384,480	*1896	7,657,741
1873	472,437	1885	2,515,110	*1897	8,672,742
1874	630,399	1886	2,702,486	*1898	8,465,818
1875	757,909	1887	2,731,036	*1899	9,257,888
1876	854,571	1888	3,172,056	*1900	10,103,940
1877	1,006,425	1889	3,175,484	*1901	10,823,128
1878	990,284	1890	3,381,992	*1902	11,720,889
1879	986,729	1891	4,997,055	*1903	10,564,026
1880	1,190,130	1892	4,536,756	*1904	10,191,160
1881	1,671,183	1893	5,859,503	*1905	10,562,513
1882	1,864,899	1894	6,544,001	*1906	10,007,626

* Year ended 30th June.

The Trust Funds subject to the Audit Act of 1902 are divided into two classes, viz.:—Trust Accounts and Special Deposits. The former is defined by the Act to mean funds of which the Treasurer is, by statutory obligation, a trustee and custodian, and moneys that have been placed to the Trust Fund under previous Audit Acts, or which may be paid thereto by the authority of the existing Act. The Special Deposits Account consists of sums deposited with the Treasurer for Store Accounts, Advance Accounts, and moneys not included in the Consolidated Revenue Account, General Loan Account, or Trust Account, which the Treasurer may direct to be placed to the Special Deposits Account.

The Special Trust Accounts consist of funds established by statute for particular objects, the principal being the Supreme Court Accounts and Sinking Funds for extinction of indebtedness on works not of a reproductive character. These accounts are operated on directly by the officers in charge of the departments, and are not directly subject to the provisions of the Audit Act, but, for general purposes, they form part of the Public Banking Account.

The total under all these headings on the 30th June, 1906, was £10,007,626, of which £8,648,607 were classed as Trust Accounts, £974,729 as Special Deposits, and £384,290 as Special Trust Accounts. The balance of the Government Savings Bank (£8,648,607) accounted for the whole of the first-mentioned item. Of the Special Deposits, the Savings Bank of New South Wales had £250,000 invested, the other large items being Fixed Deposits, £191,725; Railway Store Account, £153,464; and Assurance Fund Real Property Act, £94,580. The Supreme Court moneys aggregated £375,715 of the total Special Trust Accounts, the balance consisting of the Advances to Settlers Account (£8,575).

The existence of a large account upon which the Treasury was free to operate has been of no little assistance to the Consolidated Revenue in times past; in fact, the Trust Funds formed a strong reserve on which the Government fell back in time of need. The great bulk of the funds bore interest, whether invested or not; but the power to use those funds enabled the Government to effect a saving of interest, as similar accommodation from the banks could not be obtained under such favourable conditions. At the same time, it cannot be denied that the existence of the funds has been a strong temptation to extravagance, as without them it would not have been possible to have had the large excess of expenditure over revenue that has become so marked a feature of public finance since 1885. The distinction between the two classes of accounts has been maintained in the following table, which also shows how the various funds were invested, and the amount at credit on the 30th June, 1906:—

Account.	Amount Invested in Securities.	Amount Uninvested (used in Advances and Public Account). On which Interest is paid.	Amount Uninvested (used in Advances and Public Account). On which Interest is not paid.	Total Amount of Trust Funds on 30th June, 1906.
Trust Account—	£	£	£	£
Government Savings Bank	7,334,681	1,313,926	....	8,648,607
Special Deposits Account—				
Crown Leases Security Deposit Account	....	1,775	....	1,775
Fixed Deposits Account	....	191,725	....	191,725
Municipal Council of Sydney—				
Moore-street Improvement Loan Sinking Fund	....	1,165	....	1,165
Public Markets Loan Sinking Fund	....	9,038	....	9,038
1901 City Loan Sinking Fund	....	2,079	....	2,079
1903 Streets Loan Sinking Fund	....	2,816	....	2,816
Electric Light Loan Sinking Fund	....	57	....	57
Public Service Assurance Account	....	641	....	641
Savings Bank of New South Wales Deposit Account	....	250,000	....	250,000
Treasury Guarantee Fund	14,500	2,725	....	17,225
State Debts Commissioners' Deposit Account	....	....	40	40
State Debts Commissioners' Trust Accounts—				
Municipal Council of Sydney Sinking Fund	....	27,093	....	27,093
Testamentary and Trust Fund	....	459	....	459
Assurance Fund, Real Property Act	....	....	94,580	94,580
Bankruptcy Estates Account	....	....	4,400	4,400
Bankruptcy Suitors' Fund	....	....	2,024	2,024
Bankruptcy Unclaimed Dividend Fund	....	....	3,318	3,318
Seamen's Wages	....	....	277	277
Trust Moneys (20 Vic. No. 11)	....	....	296	296
Unclaimed Moneys	....	....	5,334	5,334
Blockholders' Loan Fund	....	....	1,684	1,684
Centenary Park Land Sales Account	....	....	1,201	1,201
Closer Settlement Act No. 37 of 1904	....	....	423	423
Hunter District Water Supply and Sewerage—				
Store Advance Account	....	....	347	347
Deferred Payments Account	....	....	201	201
Imperial Pensions Account	....	....	414	414
Police Reward Fund	....	....	6,379	6,379
Police Superannuation Account	....	....	9,797	9,797
Public Schools Property Fund	....	....	689	689
Poundage	....	....	2,328	2,328
Public Works Department—				
Security Deposit Trust Account	....	....	9,516	9,516
Services of other Departments Advance Account	....	....	2,782	2,782
Store Advance Account	....	....	63,673	63,673
Railway Store Account	....	....	153,464	153,464
Revenue Suspense Account	....	....	5,634	5,634
Sewerage Contractors Advance Account	....	....	3,908	3,908
Tender Board Deposit Trust Account	....	....	4,995	4,995
Unclaimed Salaries and Wages Account	....	....	1,173	1,173
Water Supply and Sewerage Board—				
Store Advance Account	....	....	9,147	9,147
Trust Account	....	....	1,000	1,000
Sundry Deposits Account	22,305	....	58,277	81,582
Total Special Deposit Accounts £	36,805	*489,573	*448,351	974,729
Special Accounts—				
Colonial Treasurer's—				
Master in Equity Account	22,000	130,602	....	152,602
Master in Lunacy Account	41,784	30,602	....	72,386
Curator of Intestate Estates Account	....	99,266	....	99,266
Prothonotary's Account	....	....	5,318	5,318
Registrar in Bankruptcy Account	....	...	551	551
Registrar of Probates Account	....	45,592	... ...	45,592
Advances to Settlers Account	....	......	8,575	8,575
Total Special Accounts £	63,784	306,062	14,444	384,290
Grand Total £	7,435,270	2,109,561	462,795	10,007,626

* Included in the total of these columns is a sum of £300,000 invested on fixed deposit, which cannot be distributed among the accounts shown.

With the exception of the sum deposited in the Treasury by the Savings Bank of New South Wales, which was invested at 3½, 3¾, and 4 per cent., a general rate of 4 per cent. was allowed to 31st December, 1894, on all funds entitled to interest. On the 1st January, 1895, the rate was reduced to 3 per cent. on all accounts except those on which the old rates could not be altered till the terms of the existing arrangements had expired, and these rates still continue, with the exception of the sum deposited by the Government Savings Bank, which bears interest at 3½ per cent.; that of the Savings Bank of New South Wales also at 3½ per cent.; and the Sinking Funds of the Municipal Council of Sydney, the Crown Leases Security Deposit Account, and the other Fixed Deposits which bear interest at 4 per cent.

The table just given does not, however, fully illustrate the uses to which the Trust Funds have been put; the following figures are necessary to the proper understanding of an important phase of the public accounts. On the 30th June, 1906, of Trust Funds there were invested in—

	£
Debentures, Stock, and Miscellaneous Securities..............	5,556,854
Treasury Bills	2,178,416
Used for general purposes	2,272,356
Total	£10,007,626

Trust moneys deposited with the Treasury, on which no interest is paid, amount to £175,795; while on the £7,116,965, in debenture stock and Treasury Bills, the annual payment is £244,879, or at the rate of £3 8s. 10d. per cent.

The distribution of the fund on the 30th June, 1906, according to the rates of interest, was as follows:—

Securities, etc.	Rate of Interest per cent. per annum.						
	1	1½	3	3½	4	Various Rates.	Total.
	£	£	£	£	£	£	£
Treasury Bills in aid of Revenue	...	......	1,442,526	336,890	....	......	1,779,416
Treasury Bills (Redemptions)..	...	......	....	....	399,000	......	399,000
Funded Stock—							
New South Wales, 4 per cents.	...	......	....	....	403,249	......	403,249
New South Wales Funded Stock (56 Vic. No. 1)	...	......	....	....	1,000,000	......	1,000,000
New South Wales Funded Stock (59 Vic. No. 6)......	...	......	880,000	....	....	......	880,000
New South Wales Funded Stock (60 Vic. No. 32) ...	...	......	1,014,500	....	....	......	1,014,500
New South Wales Funded Stock (1 Edw. vii No. 62)..	...	......	....	....	1,000,000	......	1,000,000
New South Wales 1924 Stock	...	......	20,000	....	....	......	20,000
New South Wales 1925 Stock	...	......	150,000	....	....	......	150,000
Advances to Settlers Act (62 Vic. No. 1)	...	......	305,000	....	....	......	305,000
Debentures	...	......	....	....	165,800	......	165,800
Invested in securities other than Government	...	600,000	3,580	....	1,725	.....	605,305
Uninvested bearing interest...	100	......	18,980	1,564,701	219,718	306,062	2,109,561
Total .... £	100	600,000	3,834,586	1,901,591	3,189,492	306,062	9,831,831

It was the practice of the Treasury to place at fixed deposit the portion of the Trust Funds not invested and held in excess of immediate requirements. At the time of the banking crisis a large sum was so invested; since then, however, the amount has been gradually reduced, and during the financial year 1900-1, the City Bank of Sydney made its final monthly payment. All funds are now held at current account, with the exception of £300,000, being portion of the Government Savings Bank Account, which is invested as a fixed deposit in the Bank of New South Wales at 1½ per cent., and £300,000 of the Special Deposits Account, which has been placed as a fixed deposit with the Commercial Banking Company of Sydney (Limited) at the same rate of interest. The total amount of interest received by the Treasury during the year ended June, 1906, on fixed deposits and other investments was £6,499, a large part of which was earned by moneys belonging to the Trust Account.

All Trust Funds under the Audit Act remaining unclaimed for a period of two years, and balances of intestate and probate estates unclaimed after a lapse of six years, are transferred and surrendered to the Consolidated Revenue, and no person can legally claim moneys so dealt with; nevertheless, the Treasury invariably recognises and pays in all cases where an otherwise valid claim can be shown. The amount transferred to the Consolidated Revenue for each of the last ten years is given below; the figures are gross, as the sum refunded cannot be given, but this is by no means considerable in any one year.

Year ended 30th June.	Amount.	Year ended 30th June.	Amount.
	£		£
1897	19,825	1902	14,454
1898	9,348	1903	12,078
1899	4,303	1904	8,566
1900	22,786	1905	18,629
1901	13,627	1906	16,108

Under the provisions of the "State Debt and Sinking Fund Act, 1904," a Board of Commissioners, called the "State Debt Commissioners," was constituted, comprising the State Treasurer, the Chief Justice, the Speaker of the Legislative Assembly, and the Under Secretary to the Treasury. From the 1st July, 1905, the following Trust Accounts were transferred to and administered by the Commissioners:—The Assurance Fund, Real Property, Act 25 of 1900; Bankruptcy Estates Account, Act 25 of 1898; Bankruptcy Suitors' Fund; Bankruptcy Unclaimed Dividend Fund, Act 25 of 1898; Country Towns Water Supply Loan Account, 57 Vic. No. 19; Country Towns Sewerage Loan Account, 57 Vic. No. 19; To Promote Settlement under the Crown Lands Act of 1895; Municipal Council of Sydney Sinking Fund, 50 Vic. No. 13; Perpetual Trustee Co., Private Act, 1898; Permanent Trustee Co., Private Act, 1898; Seamen's Wages Account; Testamentary and Trust Fund; Trust Moneys, 20 Vic. No. 11; and Unclaimed Moneys. In addition, the balances at credit of the Special Accounts established by the Treasury Bills Deficiency Act, 1889; the Treasury Bills Deficiency Act of 1893; the

Treasury Bills Deficiency Act, 1900; the Treasury Bills Deficiency (Amendment) Act, 1901; Railway Loan Redemption Act of 1889; and the Sinking Funds created by the Loan Acts of 1894 (No. 2), 1895, 1896, 1897, 1898, and 1899 were transferred to and administered by the Commissioners.

LOAN APPROPRIATIONS.

All items of expenditure to be provided for by loan are authorised under an Appropriation Act, in the same manner as the ordinary expenditure chargeable to the general revenue, while under the Inscribed Stock Act of 1883 (46 Vic. No. 12), the passing of the Loan Estimates confers the power of raising the money required without the necessity of a special Loan Act. There is a further restriction to the expenditure of money, whether from loans or revenue, in the operation of the Public Works Act of 1888. Under the provisions of this Act, the question of the advisableness of carrying out all works estimated to cost more than £20,000, except those connected with the maintenance of Railways, is referred by resolution of the Legislative Assembly to the Parliamentary Standing Committee appointed during the first Session of each Parliament. The Committee investigates and reports to Parliament, and the Assembly, by resolution, declares whether it is expedient or not to carry out the proposed work; if the declaration is in the affirmative, a Bill embodying such resolution has to be passed before the authorisation is absolute. The Loan Act of 1906 authorised the raising of a loan of £1,680,800 for services shown in the subjoined table:—

Services.	Total.
	£
Railways	587,470
Tramways	120,000
Sydney Harbour Trust—Erection of Wharves, Jetties, &c.	55,080
Metropolitan Board of Water Supply and Sewerage	184,850
Hunter District Water Supply and Sewerage Board	14,900
Water Supply and Sewerage Construction, including Country Towns	168,500
Repayment of Loans	550,000
Total £	1,680,800

It will be seen that no provision is made for redeeming a portion of the proposed loan by a sinking fund. This principle of redemption from revenue was applied to expenditure on works or services whose value will disappear by the time the loan, out of the proceeds of which they were constructed, falls due under the Loan Acts of 1894, 1895, 1896, 1897, 1898, and 1899; but was discontinued in the Loan Acts of 1900 to 1906.

The Loan Appropriations for each year from 1875 to 1906 are given in the subjoined table, the amounts proposed to be expended on Public Works being distinguished from those required for redemption of previous loans:—

Year.	Amount authorised—		
	For Public Works and Services.	For Redemption of Loans.	Total.
	£	£	£
1875	....	....	....
1876	2,236,000	....	2,236,000
1877	1,120,000	....	1,120,000
1878	....	....	....
1879	7,352,768	....	7,352,768
1880	1,262,000	....	1,262,000
1881	8,807,500	....	8,807,500
1882	....	....	....
1883	2,000,000	....	2,000,000
1884	14,388,303	....	14,388,303
1885	....	....	....
1886	3,115,398	....	3,115,398
1887	....	....	....
1888	3,641,305	1,390,600	5,031,905
1889	4,366,696	723,200	5,089,896
1890	4,982,957	2,038,800	7,021,757
1891	4,000,000	....	4,000,000
1892	4,414,568	....	4,414,568
1893	839,806	40,000	879,806
1894	1,690,662	832,000	2,522,662
1895	1,555,200	977,400	2,532,600
1896	2,205,576	65,800	2,271,376
1897	1,847,552	177,200	2,024,752
1898	2,035,837	197,700	2,233,537
1899	6,016,881	857,100	6,873,981
1900	6,298,485	404,900	6,703,385
1901	2,585,701	411,512	2,997,213
1902	6,007,072	1,063,400	7,070,472
1903	1,661,084	60,300	1,721,384
1904	1,138,551	901,500	2,040,051
1905	968,430	....	968,430
1906	1,130,800	550,000	1,680,800

Loan Appropriations are invariably in excess of the amount actually required for expenditure, and it has frequently happened that beyond obtaining Parliamentary sanction no further action has been taken in regard to loans authorised to be raised. The last statement of public accounts shows that loans to the extent of some eighteen millions were authorised, the bulk of which will, in all probability, never be issued.

Loan Account.

The Loan Account was not established until 1853, although the system of raising money by loans was introduced as early as 1842. The first ten loans of the State, which were issued under *Gazette* notices for immigration purposes, were raised on the security of the Land, or, as it was called, the Territorial Revenue; but only £329,700 was redeemed from that source, the balance being made a liability of the Consolidated Revenue, and as such eventually included in the Loan Account under the head of redemptions. From 1853 to 1870 the proceeds of loans were paid into and formed part of the Consolidated Revenue Fund; but during the year last mentioned a different principle was introduced, and a separate account was opened apart from Revenue for each loan floated, while the amount then at credit of the old loans continued to be operated upon in conjunction with the Revenue Account until 1891, when the account was finally closed. The system of separate Loan Accounts continued for about nine years; but in 1879, under authority of the Loan Fund Amalgamation Act, the nine separate Loan Funds then existing were merged into one "General Loan Account," into which also the proceeds of all loans thereafter raised were to be paid. The present system is open to technical objection, as it admits of the expenditure of money on services for which no loan has been raised; but it has the great merit of saving interest and rendering unnecessary the raising of loans when the Treasury has large sums in hand, the proceeds of former loans.

The following figures show the amount of loans raised from the commencement of the Loan Account to the 30th June, 1906, and the proceeds available for expenditure:—

Treasury Bills, Debentures, Inscribed and Funded Stock sold from 1842 to 30th June, 1906	£110,860,251
Discount, interest bonus, and charges	3,683,845
Net amount realised	£107,176,406
Add net amount transferred from Consolidated Revenue to make good amount short-raised	128,007
Add Advances to Settlers in excess of loans floated	223,174
Overcredit in 1905–6 to proceeds of Loan, 2 Edw. vii No. 108	815
	£107,528,402
Less proceeds of old loans not included in Loan Accounts	724,733
Less Municipal Debentures taken over and still outstanding	57,533
	782,266
Sum available for expenditure	£106,746,136

As the above statement shows, a sum of £110,860,251 has been raised by loan to the 30th June, 1906, in connection with which the discount, interest bonus, and other charges amounted to £3,683,845, leaving £107,176,406 available for expenditure. Up to the 30th June, 1906, £25,218,517 were redeemed, £6,250,987 being a charge on the Consolidated Revenue, and the balance, £18,967,530, representing the proceeds of new loans, leaving £85,641,734 outstanding at the close of the last financial year. The aggregate amount of interest paid by the State on its loans to the 30th June, 1906, was £59,345,459, of which the charge during the last financial year was £2,941,059. The use to which the aforementioned sum of £106,746,136 was applied is shown in the following table. It will be observed that a sum of £21,922,667 for redemption of loans is included in the total; this amount was not, of course, an item of expenditure, but its inclusion is necessary to fully account for the total of £106,746,136, in which the original loans as well as the redemption loans were included :—

Expended on—		£
Railways		45,439,259
Tramways		4,143,762
Water Supply and Sewerage		11,839,033
Sydney Harbour Trust and Darling Harbour Wharves Resumptions		6,135,202
Harbours and Rivers Navigation		4,281,361
Public Works and Buildings		4,214,981
Roads and Bridges		1,770,239
Immigration		194,430
Advances to Settlers		647,624
Works in Queensland prior to separation		49,855
Commonwealth Services		3,420,186
		£82,135,932
Redemptions—		
Loans redeemed from Proceeds of New Loans	£18,967,530	
Treasury Bills in aid of Revenue paid off	2,955,137	
		21,922,667
Treasury Bills in aid of Revenue current		1,814,516
		£105,873,115
Credit Balance of Loan Account on 30th June, 1906		873,021
Total (as shown on previous page)		£106,746,136

The sum actually expended from loans was, therefore, £83,950,448, the balance to make up the total of £106,746,136 being represented by redemptions and credit balance. Of the sum mentioned, £72,486,241, or over 86 per cent., has been expended on directly productive works yielding or capable of yielding revenue towards meeting the charges for interest. Besides the sum just referred to, £5,985,220 has been spent on other works of a permanent nature, such as roads and bridges, schools, and public buildings, which, though not directly productive, have been undertaken for the development of the resources of the State, and for facilitating settlement. The balance of £83,950,448, viz., £5,478,987, has been expended in reduction of the deficiency in revenue to 30th June, 1905, and on unproductive services, the items being £1,814,516 in reduction of the deficiency in revenue to 30th June, 1905, £3,420,186 on services transferred to the Commonwealth, £49,855 for public works in Queensland prior to separation, and £194,430 for the promotion of immigration. The figures last given represent the expenditure on immigration under responsible government, prior to the assumption of which £724,733 was expended on this service, making a total expenditure of £919,163 for the encouragement of immigration.

The loan expenditure on account of the various services from 1902 to 1906 was as follows :—

Head o Service.	*1902.	*1903.	*1904.	*1905.	*1906.
	£	£	£	£	£
Railways	1,616,506	1,214,638	707,996	316,645	479,403
Tramways	627,166	469,117	97,524	185,064	49,848
Telegraphs and Telephones	39,287	......	......	......	......
Water Supply and Sewerage—					
Water Supply—					
Metropolitan	108,966	249,233	128,817	143,906	240,719
Hunter District	10,126	7,777	23,097	19,909	10,062
Country Towns and Mining Townships	20,934	19,452	22,079	4,320	8,269
Sewerage—					
Metropolitan	206,464	170,928	67,714	44,117	61,242
Hunter District	23	518	9,226	13,046	12,136
Country Towns	12,754	17,322	17,331	6,256	2,769
Water Conservation and Irrigation	131,938	89,351	42,041	11,218	30,245
Harbours and Rivers Navigation—					
Wharfs, including resumptions	1,431,719	1,757,582	813,567	409,984	189,915
Docks	8,457	12,707	5,550	1,577	17
Harbours	43,802	78,187	4,408	23,351	49,414
Rivers	141,065	122,908	46,191	17,054	17,434
Navigation	33,269	12,844	2,985	18,746	......
Alteration of Dredges, Punts, etc.	23,294	10,053	3,616	......	......
Reclamation Works	16,781	23,065	2,896	......	......
Roads and Bridges	150,777	78,471	47,812	59,019	23,800
Fortifications and Military Works, and Naval Station, Sydney Harbour	3,851	......	......	......	......
Public Works, Buildings, etc.—					
Charitable Institutions	49,877	72,779	45,498	36,984	9,812
Administration of Justice	58,566	36,106	31,777	19,661	27,655
Educational	43,105	19,884	16,908	7,405	11,901
Public Instruction, School Buildings, etc.	30,000	55,000	50,000	25,000	33,311
Other Public Buildings and Works	60,958	22,008	19,887	18,228	20,077
Purchase of Sites and Erection of Buildings for Local Land Boards and Survey Offices	700	57	......	......	......
Forest Reserves, for thinning out and improving	......	11	......	......	......
Compensation for cancellation under Mining Act of 1889	......	10	......	......	......
To promote settlement under Crown Lands Act of 1895	51	......	......	......	......
Advances to Settlers	40,558	168,504	76,824	60,768	84,027
Hay Irrigation Works	......	......	......	......	......
Clearing and Improving Crown Lands	23,585	3,774	202	......	......
Jenolan Caves—For resumption of Accommodation House, and to provide improved buildings	9	......	......	......	......
Wombeyan Caves—Accommodation House	357	......	......	......	......
Yarrangobilly Caves—Accommodation House	196	......	301	......	......
Kurnell—Accommodation House	600	......	......	......	......
Blockholders' Loan Fund	......	2,000	......	......	.....
Closer Settlement	......	......	......	139,000	......
Municipal Works taken over by the State (the expenditure on these Works is not rightly chargeable to the years in which the transfers were made)	......	9,100	......	......	......
Roads of access to Crown Lands	......	......	......	......	4,966
Total Expenditure on Public Works, etc. £	4,939,241	4,713,386	2,288,742	1,571,257	1,367,022
Loans repaid by New Loans (including Treasury Bills)	1,468,100	461,500	476,800	2,123,200	1,835,500
Total £	6,407,341†	5,174,886	2,765,542	3,694,457	3,202,522

* Year ended 30th June. † Exclusive of £1,551,250 for repayment of Advances.

During the five years ended 30th June, 1906, £4,335,188 has been expended upon railways, £1,428,719 on tramways, £39,287 on telegraphs and telephones, £1,017,666 on water supply for the Metropolitan and Hunter River Districts and Country Towns and Mining Townships, £641,845, on sewerage for the Metropolitan District and Country Towns, £304,793 for water conservation and irrigation, and £4,602,767 on wharfs including resumptions. This latter item includes the payments made for the resumptions of the Darling Harbour wharfs and that portion of the City of Sydney locally known as "The Rocks." An amount of £139,000 has also been expended on the resumption of an estate for the purposes of closer settlement. Most of the foregoing items were for services likely to be permanently revenue-producing, or deemed necessary for the proper development of the State; it must, however, be confessed that there has been some expenditure on works and services for which there will be in a few years no substantial assets remaining. Items of this kind it is intended in future to pay for altogether out of revenue, or if out of loans, to provide for their ultimate payment out of revenue by means of a sinking fund.

In the early stages of Australasian borrowing the expenditure was moderate, loans were hard to raise, and interest high; but latterly, as the conditions under which loans could be contracted became favourable, especially after 1875, few of the States set any bounds to their requirements. It was a repetition of the old experience, the opportunity engendered the desire, and the open purses of the investors tempted the States to undue borrowing and lavish expenditure. What is termed a "vigorous public works policy" was the order of the day, and works were pressed forward which under other circumstances would not have been undertaken, or have been held back until the growth of population warranted their construction. The plethora of money has been harmful in many ways, but is most apparent in the construction of not a few branch railways in outlying and sparsely-settled districts which do not pay even their working expenses, with the consequence that the interest on loan capital has to be met out of general revenue. In some instances the present generation will pass away before this condition of affairs will be remedied. But when every allowance has been made for unwise or improvident expenditure, it will be found that by far the larger portion of the proceeds of loans has been well expended. While until the year just closed the revenue-producing works did not yield a sum sufficient to pay working expenses and interest; nevertheless, a practical consideration of the conditions which surround Australasian settlement will demonstrate that to some extent the construction of these works was justifiable, for, apart from the certainty that they will be self-supporting, they have already materially assisted in developing the country's resources, and have largely enhanced the value of the public estate.

The loan expenditure, exclusive of payments on account of redemptions, between 1842 and 1890, and thereafter annually up to 1906, is shown below:—

Year.	During each year.				At the close of each year.			
	Amount.	Per inhabitant.			Amount.	Per inhabitant.		
	£	£	s.	d.	£	£	s.	d.
1842 to 1890	....	....			43,955,551	39	3	7
1891	4,750,167	4	3	2	48,705,718	41	18	2
1892	3,014,680	2	11	3	51,720,398	43	7	11
1893	1,929,580	1	12	1	53,649,978	44	3	5
1894	1,330,046	1	1	8	54,980,024	44	7	4
*1895	659,125	‡0	10	8	55,639,149	43	17	6
†1896	1,279,098	1	0	3	56,918,247	44	2	7
†1897	1,477,318	1	3	1	58,395,565	44	10	7
†1898	1,653,143	1	5	5	60,048,708	44	19	1
†1899	2,025,359	1	10	7	62,074,067	45	14	10
†1900	2,397,188	1	15	8	64,471,255	47	7	4
†1901	2,785,029	2	0	10	67,256,284	49	4	5
†1902	4,939,241	3	11	7	72,195,525	51	14	7
†1903	4,713,386	3	7	0	76,908,911	54	4	10
†1904	2,288,742	1	12	0	79,197,653	54	15	7
†1905	1,571,257	1	1	6	80,768,910	54	12	9
†1906	1,367,022	0	18	3	82,135,932	54	4	10

* Six months ended 30th June. † Twelve months ended 30th June. ‡ Amount for six months.

Prior to 1875 the loan expenditure on works was moderate, and calls for no special comment. In the year named, however, the amount spent was more than double that of 1874, and that year may be considered the starting-point of the vigorous public works policy already alluded to. The figures in the table speak for themselves. In regard to the year 1891, and in some degree to 1892, it may be as well to note that there was a large expenditure on account of quadrupling a portion of the main line in the metropolitan area—a work of urgent necessity, without which the Railway Commissioners professed themselves unable to carry on with safety and efficiency the large interests entrusted to them. Besides this expenditure, a sum of £1,000,000 was expended on reconstruction of rolling stock and permanent way, which, being for renewals, was properly a charge against working expenses, but the sum was advanced to the Commissioners from the General Loan Account in accordance with a special Act of the Legislature, to be repaid by them presumably out of the earnings of the railways under their control—the annual payment in redemption of the advance being fixed at £75,000. It has been pointed out in another part of this chapter that, with the exception of the financial years ended 30th June, 1899, 1901, and 1906, the railways did not earn sufficient to meet the whole of the annual interest chargeable on the debt liability, so that the payment of the instalment in the manner provided was an impossibility; and, although the sum of £75,000 appears in the public accounts as being repaid from railway earnings, it was in reality a charge on the general revenue of the State.

The growth of the loan expenditure, so marked in the past decade, is hardly likely to be continued, as, apart from the salutary check imposed by the investigations of the Parliamentary Standing Committee on Public Works, railway construction, for which most of the loans have been raised, will in the future be confined to perfecting the various systems in operation, and to the gradual extension of the coast lines north and south.

A perusal of the previous pages indicates that, while the public debt of the State on the 30th June, 1906, aggregated £85,641,734, there has been an expenditure of £82,135,932 on public services. The receipts and expenditure in connection with the Railways and Tramways, the Metropolitan and Hunter District Water and Sewerage Boards, and the Sydney Harbour Trust, have been ascertained for the past five years, and are set forth in the subjoined table, to which has been added columns showing the surplus left to meet interest obligations, the interest obligations, and the shortage or excess of each year's operations. In the consideration of these figures, the fact must not be overlooked that the transactions of the first three years, and partly that of the fourth, cannot be considered as normal, inasmuch as the greater part of the State, and certainly that portion involving the most vital interests, had not recovered from the effects of the severe drought, and, therefore, not only were the sources of revenue restricted, but the working expenditure necessary to obtain the results secured was unduly increased:—

Year ended 30th June.	Receipts.	Working Expenses.	Amount available to meet Interest on Capital Cost.	Interest Obligations on Capital Cost.	Deficiency.	Excess.
	£	£	£	£	£	£
1902	4,918,609	3,002,680	1,915,929	1,981,501	65,572	....
1903	4,744,595	3,169,470	1,575,125	2,046,289	471,164	....
1904	4,943,130	3,132,636	1,810,494	2,133,548	323,054	....
1905	5,288,948	3,131,826	2,157,122	2,167,782	10,660	....
1906	5,854,595	3,184,816	2,669,779	2,136,660	....	533,116

HISTORY OF THE PUBLIC DEBT.

When in 1831 it was decided to abolish the system of free land grants, and to dispose of the public estate by auction in lieu of private tender, it was also decided that the proceeds of land sales should be paid into what was called the Land Fund, from which were to be paid the charges incident to the introduction of immigrants; and it was from the inability of the Land Fund to meet these charges that the public debt of New South Wales first had its rise. From 1831 to 1841 the Land Fund was sufficient, but in the year last named the engagements for immigration purposes were so heavy that it became necessary to supplement the Fund in some way, and for this purpose it was decided by the Governor to borrow on the security of the territorial or Land Revenue. Accordingly, on the 28th December, 1841, a debenture loan of £49,000 was offered locally under *Gazette* notice. This loan was issued during 1842 in two instalments, the nominal rates of interest being 5¼d. and 4d. per cent. respectively per diem. The loan at the higher rate was raised at par, and the other at a discount of 2 per cent. This was the first loan floated in the State, as well as the first raised by any of the Australasian Governments. Including those just mentioned, there were issued between the years 1842 and 1855 ten loans, amounting in the aggregate to £705,200, the proceeds of which were devoted to the furtherance of immigration. Debentures representing these immigration loans were redeemed to the value of £329,700 from the Territorial Revenue, while the balance of £375,500 was taken over as a liability on the general revenue of the State, and ultimately became incorporated in the public debt. In addition to the Immigration Loans, there were others, six in number, authorised by acts of Council. These were not all issued until after responsible government was proclaimed. Under the authority of the above-mentioned Acts, the first instalment of a loan for £683,300 was placed on the London market during the years 1854 and 1855. This was the first Australasian loan issued in England, and the forerunner of numerous others, representing a liability of £300,618,861 for Australasia outstanding in June, 1906.

The Public Debt in November, 1855, when responsible government was proclaimed, was £1,000,800, distributed under the following heads:—

	£
Raised on the Security of Territorial Revenue—	
Immigration	423,000
Sydney Railway Company's Loan	217,500
Raised on the Security of General Revenue—	
Amount for Sydney Sewerage	54,900
,, ,, Sydney Water Supply	28,000
,, ,, Railways	256,400
,, ,, Public Works	21,000
Total	£1,000,800

Of the total shown above, £47,500 was redeemed out of the Territorial Revenue; the remainder, although afterwards nominally redeemed by new loans, in reality forms part of the existing public debt.

The debt outstanding at each quinquennial period is given in the subjoined table. It will be seen that the appetite for borrowing increased with the growth of population. From 1850 to 1860 the average annual increase of indebtedness was £370,000; from 1860 to 1870, £585,000:

from 1870 to 1880, £522,000; from 1880 to 1890, £3,348,000; from 1890 to 1900, £1,695,000; and from 1901 to 1906, £3,384,800:—

Year.	Amount.	Year.	Amount.	Year.	Amount.
	£		£		£
1842	49,500	1870	9,681,130	*1901	67,361,246
1845	97,900	1875	11,470,637	*1902	71,592,485
1850	132,500	1880	14,903,919	*1903	77,692,987
1855	1,000,800	1885	35,564,259	*1904	80,033,581
1860	3,830,230	1890	48,383,333	*1905	82,321,998
1865	5,749,630	*1900	65,332,993	*1906	85,641,734

* 30th June.

The increase has been most marked since 1880, the period covered by the following table, which contains the more important particulars necessary for a right understanding of the public loan accounts. The amount of bonds or stock sold has been placed against the year in which the sales were effected, and not, as is the practice of the Treasury, against the year in which they were brought to account:—

Year ending on the 31st December.	Treasury Bills, Debentures, and Stock at close of each year—								
	Authorised.	Sold.	Redeemed.			Unredeemed (Outstanding Public Debt).			
			From Consolidated Revenue.	By New Loans.	Total.	Total.	Per Inhabitant.		
	£	£	£	£	£	£	£	s.	d.
1880	27,333,964	17,986,519	1,371,870	1,710,730	3,082,600	14,903,919	19	18	6
1881	36,141,464	20,040,719	1,405,970	1,710,730	3,116,700	16,924,019	21	12	10
1882	36,141,464	22,040,719	1,608,770	1,710,730	3,319,500	18,721,219	22	19	5
1883	38,141,464	28,045,719	1,702,530	1,710,730	3,413,260	24,632,459	28	12	0
1884	51,824,267	33,550,719	1,738,030	1,710,730	3,448,760	30,101,959	33	5	3
1885	51,824,267	39,050,719	1,775,730	1,710,730	3,486,460	35,564,259	37	9	1
1886	54,939,660	44,550,719	1,805,740	1,710,730	3,516,470	41,034,249	41	9	6
1887	54,939,660	44,560,719	1,854,640	1,710,730	3,565,370	40,995,349	40	3	7
1888	60,056,565	48,188,619	1,897,740	2,197,830	4,095,570	44,093,049	41	19	0
1889	65,146,461	53,595,719	1,943,240	3,098,930	5,042,170	48,553,549	44	17	8
1890	74,929,218	54,331,503	2,131,240	3,816,930	5,948,170	48,383,333	43	2	7
1891	74,929,218	59,325,703	2,311,640	4,063,330	6,374,970	52,950,733	45	11	3
1892	83,119,494	62,837,203	2,501,340	5,862,430	8,363,770	54,473,433	45	14	2
1893	84,015,300	67,919,103	2,687,340	5,902,730	8,590,070	59,329,033	48	17	0
1894	86,537,962	69,058,533	2,879,250	7,153,130	10,032,380	59,026,153	47	12	7
*1895	86,540,462	69,086,213	2,890,250	7,975,030	10,865,280	58,220,933	46	11	0
*1896	87,257,462	74,673,353	3,062,750	9,199,230	12,261,980	62,411,373	49	2	4
*1897	89,533,238	76,240,078	3,764,550	11,401,030	15,165,580	61,074,498	47	6	7
*1898	91,557,990	78,635,300	4,118,850	11,403,730	15,522,580	63,112,720	48	1	0
*1899	94,291,527	79,808,346	4,270,850	11,775,430	16,046,280	63,762,066	47	16	3
*1900	101,165,508	81,535,373	4,420,850	11,781,530	16,202,380	65,332,993	48	4	9
*1901	107,868,893	84,575,126	4,570,850	12,643,03	17,213,880	67,361,246	49	6	0
*1902	111,621,285	90,429,602	4,725,987	14,111,130	18,837,117	71,592,485	51	6	0
*1903	120,200,858	97,201,004	4,975,987	14,532,030	19,508,017	77,692,987	54	14	3
*1904	123,047,542	100,793,398	5,750,987	15,008,830	20,759,817	80,033,581	55	7	2
*1905	125,615,192	105,455,015	6,000,987	17,132,030	23,133,017	82,321,998	55	13	9
*1906	128,660,513	110,860,251	6,250,987	18,967,530	25,218,517	85,641,734	56	11	2

* Year ended 30th June.

In dealing with the figures under the head of loans redeemed, it must be borne in mind that the loans paid off from revenue can alone be said to be redeemed. Where an old loan is redeemed out of the proceeds of subsequent loans, there is merely a change in the form of the liability, with, as a rule, some reduction of the interest charge.

The following table shows the annual payments under each head for interest and expenses of the public debt since 1887. For the year 1893 the figures shown for interest do not represent the actual liability of that year, as the sum of £288,750, properly chargeable to 1892, was not brought to account until the following year; otherwise the figures are correct:—

Year.	Interest.	Redemptions (including premium on purchase of Debentures on account of Railway Loan, 31 Vic. No. 11).	Expenses connected with management of Inscribed Stock, Bank of England.	Commission paid to Financial Agents in England and New South Wales.	Annual Interest and Charges paid.			
					Total.	Per Inhabitant.		
	£	£	£	£	£	£	s.	d.
1887	1,643,522	50,773	11,903	3,563	1,709,761	1	14	0
1888	1,702,595	44,588	13,160	2,862	1,763,205	1	14	1
1889	1,760,274	49,519	14,426	4,292	1,828,511	1	14	4
1890	1,857,656	39,203	15,855	3,068	1,915,782	1	14	9
1891	1,874,616	105,400	16,680	2,389	1,999,085	1	15	0
1892	1,715,096	115,196	18,259	3,410	1,851,961	1	11	5
1893	2,440,326	111,897	19,057	1,384	2,572,664	2	2	9
1894	2,255,255	107,502	19,952	1,869	2,384,578	1	18	10
*1895	1,133,566	21,561	10,249	827	1,166,203	‡0	18	10
†1896	2,262,996	261,511	16,923	1,718	2,543,148	2	0	4
†1897	2,267,861	265,811	18,626	2,353	2,554,651	1	19	11
†1898	2,255,690	300,248	18,600	1,941	2,576,479	1	19	6
†1899	2,292,955	255,840	19,076	1,584	2,569,455	1	18	10
†1900	2,310,271	264,561	19,206	1,397	2,595,435	1	18	8
†1901	2,346,852	269,412	19,207	2,233	2,637,704	1	18	8
†1902	2,498,750	274,550	19,250	2,825	2,795,375	2	0	6
†1903	2,619,766	369,413	20,211	2,876	3,012,266	2	2	10
†1904	2,745,348	369,412	20,637	2,479	3,137,876	2	3	10
†1905	2,856,872	319,413	20,640	1,766	3,198,691	2	3	9
†1906	2,941,059	350,000	20,643	3,137	3,314,839	2	4	4

* Six months ended 30th June. † Twelve months ended 30th June. ‡ Amount for six months.

At present the net revenue from the public works of the country is entirely comprised in that derived from railways, tramways, water supply and sewerage, and the Sydney Harbour Trust. The control of the Electric Telegraphs having passed to the Federal Government on the 1st March, 1901, they need not now be considered in this connection. The water and sewerage works of the Metropolitan area are not yet completed, and are now self-supporting—that is, the revenue is sufficient to meet the amount required to be expended on account of maintenance, management, depreciation, and interest on capital liability. The same remarks apply to the works under the control of the Hunter District Board. In connection with these works it must, however, be borne in mind that, in the absence of a complete and compulsory reticulation, there must be a large outlay of capital expenditure on which no return is received.

The public debt is partly funded and partly unfunded, the funded debt comprising debentures, inscribed and funded stocks; and the unfunded, Treasury Bills. The two classes are defined by the difference in currency, the funded debt being long-dated loans, and the unfunded, short-dated loans. Originally the term "funded" was applied only to interminable stocks, the amount of which, £530,190, is, as compared with the total debt, unimportant; but it is now the practice to apply this term also to redeemable debts. The amounts outstanding on the 30th June, 1906, under each class, and the total debt, were as follow:—

Description of Stock.	Amount outstanding, 30th June, 1906.		Annual Interest thereon.
	£	£	£
Funded Debt—			
Debentures—			
Overdue, or unpresented, which have ceased to bear interest	3,250	....	....
Still bearing interest	8,531,900	....	341,303
N. S. Wales 4 per cents. (Interminable)	530,190	....	21,208
,, Funded Stock	13,003,708	....	463,427
,, 1924 Stock	198,065	....	5,942
,, 1925 ,,	222,255	....	6,668
Inscribed Stock (in London)	53,512,500	....	1,858,869
,, Advances to Settlers Act	425,050	....	12,801
Total, Funded Debt		£76,426,918	....
Unfunded Debt—			
Treasury Bills (for Loan Services)—			
Overdue, or unpresented, which have ceased to bear interest	7,400	....	....
For Public Works	4,490,000	....	177,587
Darling Harbour Resumptions	1,000,000	....	40,000
Redemption	1,902,900	....	56,435
Treasury Bills (Deficiency in Revenue)	1,814,516	....	68,616
Total, Unfunded Debt		£9,214,816	....
Total Public Debt		£85,641,734	3,052,856

The following table shows the total amount of stock under each rate of interest. There were, however, overdue, 5 per cent. debentures to the amount of £4,050 outstanding on the 30th June, 1906, which have ceased to bear interest:—

Interest—Per cent.	Amount of Stock.	Annual Interest thereon.
	£	£
5	*4,050	135
4	†29,028,694	1,160,852
3¾	1,825,000	68,437
3½	‡35,995,792	1,259,786
3	18,788,198	563,646
Total	£85,641,734	£3,052,856

* Includes £1,350 overdue debentures. † Includes £5,500 overdue Treasury Bills and £1,900 overdue debentures. ‡ Includes £1,900 overdue Treasury Bills.

The 3 per cents. comprise £1,500,000 Inscribed Stock, floated in London during January, 1898, and Inscribed Stock, floated in London under 50 Vic. No. 28, 52 Vic. No. 17, 53 Vic. No. 23, 59 Vic. No. 5, and 64 Vic. No.10; Funded Stock raised locally under Acts 58 Vic. No. 14, 59 Vic. No. 6, 60 Vic. No. 32, 62 Vic. No. 1, and 2 Edward VII No. 106;

and Treasury Bills representing Trust Funds in the hands of the Government, and so invested. The whole of these Treasury Bills bore interest at the rate of 4 per cent. to 31st December, 1894, but the rate of interest on a large proportion was reduced to 3 per cent. from the 1st January, 1895.

DATES OF MATURITY.

The dates of repayment extend from 1901 to 1935; the sums repayable in the different years vary considerably in amount, the largest sum in any one year being £16,698,065 in 1924. The redemption of such a large amount in one year is happily far distant, and before it arrives a more satisfactory procedure in dealing with loans falling due will be devised than now obtains. The question of the consolidation of loans has received some attention, and any scheme of consolidation adopted will probably provide for the principle of redemption over a specified time, at the option of the Government, and not on a given day as is the present practice.

The following table shows the due dates and the amount repayable in each year:—

Class of Security.	Interest Rate.	Amount raised in— London.	Amount raised in— Sydney.	Total Outstanding.	Year when Due.
		£	£	£	
Debentures	5	1,350	....	1,350	Overdue.
"	4	600	....	600	Overdue.
"	4	1,300	....	1,300	Overdue.
"	4	....	224,900	224,900	1906.
Funded Stock	4	....	550,000	550,000	1907.
Debentures	4	2,865,500	....	2,865,500	1908.
"	4	384,000	816,854	1,200,854	1909.
"	4	2,863,700	....	2,863,700	1910.
"	4	60,000	....	9,884,508	1912.
N.S.W. Funded Stock	4	....	2,549,350		
" "	3½	....	1,500,000		
" "	3½	....	1,768,456		
" "	3	....	4,006,702		
Debentures	4	2,000,000	1,131,100	3,858,881	1915.
Inscribed and Funded Stock	3½	....	727,781	....	1905.
" Stock	3½	12,826,200	....	12,826,200	1918.
" "	3	....	425,050	425,050	1919.
" and Funded Stock	3½	....	84,565	84,565	1921.
" Stock	3½	16,500,000	....	16,698,065	1924.
N.S.W. 1924 Stock	3	....	198,065		
" 1925 "	3	....	222,255	222,255	1925.
Inscribed Stock	4	9,686,300	....	9,686,300	1933.
"	3	12,500,000	....	12,500,000	1935.
"	3½	2,000,000	....	2,000,000	1950.
N.S.W. 4 per cents.	4	....	530,190	530,190	Interminable.
Permanent	5	....	2,700	2,700	Permanent.
Funded Debt	£	61,688,950	14,737,968	76,426,918	
Treasury Bills (For Loan Services)	4	4,000	....	4,000	Overdue.
" " (For Public Works)	4	1,500	....	1,500	Overdue.
" " (Deficiency of Revenue)	4	....	31,500	31,500	£150,000 redeemed annually.
" " " "	3	....	1,090,947	1,090,947	
" " " "	3	....	355,179	355,179	£100,000 redeemod annually.
" " " "	3½	....	336,890	336,890	Payment up to £50,000 annually from surplus.
" " (For Public Works)	3½	....	1,900	1,900	Overdue.
" " " "	3½	....	325,000	325,000	1907.
" " (Darling Harbour Resump'ns)	4	500,000	500,000	1,000,000	1907.
" " (For Public Works)	3½	240,000	....	240,000	1907.
" " " "	4	3,500,000	75,000	3,575,000	1907.
" " " "	4	....	100,000	100,000	1908.
" " " "	4	....	250,000	250,000	1908.
" " (Redemptions)	4	....	402,900	402,900	1910.
" " "	3½	....	1,500,000	1,500,000	1910.
Unfunded Debt	£	4,245,500	4,969,316	9,214,816	
Total Public Debt	£	65,934,450	19,707,284	85,641,734	

As will be seen in this table, New South Wales is indebted to the London market for almost the whole of the money raised under loan. This dependence on the English market was originally due to the lack of local capital; but of late years, when such capital has been fairly abundant, the Government has still turned to London, where the rate of interest at which it could borrow was much below what would have been demanded by the local capitalists. The local and English rates are now much nearer than at any period in the history of Australia, and it is probable that the Government could place small loans almost as advantageously in Sydney as in London.

FINANCIAL AGENTS.

Since the inception of responsible government, the State has had special local and London agencies to conduct its banking business. The Bank of New South Wales was first appointed, and under its auspices the first external loan of 1854 was issued. The Oriental Bank Corporation negotiated all subsequent loan issues until 1869, when the Bank of New South Wales again took up the management of loan operations in London. In 1884 the business was transferred to the Associated Banks, which were represented in England by the London and Westminster Bank. On the 31st December, 1889, the agreement with the Associated Banks came to an end, and on the first day of the succeeding year the London and Westminster Bank became the State's authorised agent to transact such financial business connected with the London account as was not undertaken by the Bank of England, while the Associated Banks divided amongst them the local business. The arrangement continued until the crisis in 1893, when the Bank of New South Wales again became sole local agent for the Government. During 1895-6 a current account was opened at the City Bank of Sydney, and during 1896-7 a similar account was opened at the Commercial Banking Company of Sydney (Limited).

The Bank of England has been the State's agent for the issue and management of stock since 1884, although this institution inscribed the bulk of the loan of 1882 and the two issues of 1883, negotiated in London by the Bank of New South Wales. Its charges for negotiation and management are, however, higher than those of the London and Westminster Bank, which acts in a similar capacity for Victoria, Western Australia, and Tasmania. The prestige of the former institution, no doubt, influenced the Government in its choice of an agent. Outside inscribed stock transactions the Government prefers accepting aid from other banks in issuing loans, and accordingly the London and Westminster Bank, during 1892 and 1893, issued and negotiated £3,250,000 Treasury Bills. In February, 1906, however, the London and Westminster Bank acted as agent in the negotiation of an inscribed stock loan of £2,000,000.

CHARGES ON FLOATING LOANS.

The charges incidental to the floating of an inscribed stock loan in England are heavy. The chief expense is the composition duty of 12s. 6d. per cent. to the British Government on inscribed stock. The other charges—bank commission, ½ per cent.; brokerage, ¼ per cent.; and minor expenses, which amount to about 1s. per cent.—are for services rendered.

The expenses incurred for the inscription and management of stock by the Bank of England are £500 per million for the first ten millions, £450 for the next five, and £400 per million for the next twenty-nine millions, and £200 per million for all further amounts. Prior to March, 1895, the charges were £100 per million more in each case. From May, 1899, all amounts raised through the agency of the Bank of England are charged £200 per million.

The commission paid to the London and Westminster Bank for the issue of the £2,000,000 inscribed stock in February, 1906, was ½ per cent., and the agreement provides for the payment of £250 per million annually for the inscription and management of the loan.

The subjoined statement gives the charges of negotiation of the two last loans issued by the State in debenture form, and of the inscribed stock loans floated during the period 1883-1906:—

Year when Floated.	Amount of Principal.	Gross Proceeds.	Charges.				Expenses per £100 of—	
			Stamp Duty.	Bank Commission.	Brokers' Commission, Postage, and Petty Expenses.	Total.	Principal.	Gross Proceeds.
	£	£	£	£	£	£	£ s. d.	£ s. d.
			Issued (in London) as Debentures.					
1881	2,050,000	2,120,697	2,562	3,813	5,298	11,673	0 11 5	0 11 1
1882	2,000,000	2,042,968	2,500	3,750	5,189	11,439	0 11 5	0 11 2
1904-5	1,000,000	1,990,000	2,500	5,000	*30,272	37,772	1 17 9	1 18 0
1904-5	1,000,000							
			Issued (in Sydney) as Debentures.					
1904-5	131,100	131,100	nil.	nil.	nil.	nil.	nil.	nil.
			Issued (in London) as Inscribed Stock.					
1883	3,000,000	3,001,067	18,750	5,000	7,500	31,250	1 2 0	1 2 0
1883	3,000,000	3,018,791	18,750	5,000	7,809	31,559	1 2 3	1 2 1
1884	5,500,000	5,152,886	34,375	27,500	14,289	76,164	1 7 8	1 9 7
1885	5,500,000	5,042,041	34,375	27,500	14,436	76,311	1 7 9	1 10 3
1886	5,500,000	5,247,692	34,375	27,500	14,481	76,356	1 7 9	1 9 1
1888	3,500,000	3,626,341	21,875	17,500	9,380	48,755	1 7 10	1 6 11
1889	3,500,000	3,584,105	21,875	17,500	9,379	48,754	1 7 10	1 7 3
1891	4,500,000	4,276,080	28,125	22,500	11,784	62,409	1 7 9	1 9 2
1891	294,280	294,200	1,839	176	696	2,711	0 18 5	0 18 5
1893	200,000	191,850	·1,250	Nil.	500	1,750	0 17 6	0 18 4
1893	2,500,000	2,514,861	15,625	12,500	6,853	34,978	1 8 0	1 7 10
1894	832,000	846,483	5,200	4,160	2,876	12,236	1 9 5	1 8 11
1895	4,000,000	3,876,685	25,000	20,000	10,721	55,721	1 7 10	1 8 9
1898	1,500,000	1,506,269	9,375	7,500	4,441	21,316	1 8 5	1 8 4
1901	4,000,000	3,760,000	25,000	20,000	*60,347	105,347	2 12 8	2 16 0
1902	3,000,000	2,885,000	18,750	15,000	*45,608	79,358	2 12 11	2 16 0
1905-6	2,000,000	1,990,000	12,500	5,000	32,062	49,562	2 8 0	2 8 8

* Includes underwriting commission of 1¼ per cent.

REDEMPTIONS AND SINKING FUNDS.

Loans are either redeemed or renewed. In the former case, the amount of the obligations of the State to its public creditors is reduced; in the latter case the liability remains the same. Repayments, however, are chiefly effected under the head of renewals. The State Debt and Sinking Fund Act of 1904 was brought into operation on the 1st July, 1905. Under the provisions of this Act a general sinking fund was created, and an annual appropriation of £350,000 is made to the credit of the fund, and such further amount as Parliament may provide. The Commissioners are directed from time to time to apply the amount at credit of the fund in purchasing, redeeming, or paying-off Government stock, debentures, or Treasury bills; meanwhile they are empowered to invest the moneys under the Act. It must, however, be borne in mind that the whole amount of £350,000 will not be available for general purposes, inasmuch as a sum of £250,000 is required yearly to retire matured Revenue Deficiency Bills in accordance with the terms of the Acts under which they were issued. The residue (£100,000), together with credits, interest on stocks, fixed deposits in banks of issue, and any balance brought forward from the previous period constitutes the amount available for application to redemptions in any one year. The balance at credit of the fund on the 1st July, 1906, was £566,484. During July, 1906, the balance was reduced by the redemption of matured debentures to the amount of £224,900. On the other hand, the withdrawal was partly compensated for by a credit of £50,000 out of the Consolidated Revenue Fund, in accordance with the provisions of the Treasury Bills Deficiency Act of 1905. The transactions under the Act for the financial year ended 30th June, 1906, were as follow:—

Dr.

	£	£
To Balance taken over from Colonial Treasurer—		
Cash	395,017	
Bank Fixed Deposits	59,419	
		454,436
Country Towns Water Supply—Repayments		500
Country Towns Sewerage—Repayments		37
To promote settlement under Crown Lands Act of 1895—Repayments		10,016
Annual Contribution from Consolidated Revenue Fund		350,000
Interest on Investments		1,182
Interest on Current Accounts		313
Total		£816,484

Cr.

	£	£
By Redemptions—		
Treasury Deficiency Bills, 53 Vic. No. 9	150,000	
Treasury Deficiency Bills, 64 Vic. No. 68 and 1 Edw. VII No. 8	100,000	
		250,000
By Balance at credit of Commissioners—		
On Fixed Deposit	309,419	
On Deposit with Colonial Treasurer	40	
On Account Current	257,025	
		566,484
Total		£816,484

Under the provisions of the "State Debt and Sinking Fund Act, 1904," the balances at credit of the Special Accounts established by the Treasury Bills Deficiency Act, 1889; the Treasury Bills Deficiency Act of 1895; the Treasury Bills Deficiency Act, 1900; the Treasury Bills Deficiency (Amendment) Act, 1901; the Railway Loan Redemption Act of 1889; and the Sinking Funds constituted by the Loan Acts of 1894 (No. 2), 1895, 1896, 1897, 1898, and 1899, were transferred to and administered by the State Debt Commissioners from the 1st July, 1905.

QUOTATIONS FOR STOCK.

The standard of the State's credit can be gauged either from the prices obtained by original investors in loans, or from the prices quoted on the market for New South Wales representative stock. The ordinary stock transactions on the London Exchange are, perhaps, a better guide, as, unless the market quotations are disturbed by the issue of a loan by New South Wales itself, or by any other State of the Australasian group, the standard of credit can be established daily, and, consequently, up to date.

The following table shows the monthly quotations during 1905-6 on the London market for the £16,500,000 3½ per cent. inscribed stock maturing October, 1924:—

Date.		Average Market Price.		Annual Rate per £100 sterling yielded to investors if stock is held till date of maturity.
Month.	Day.	"Cum Dividend."	"Ex Dividend."	
1905.				£ s. d.
July	1st	99½	98·63	3 12 4¼
August	5th	100½	99·29	3 13 6
September	2nd	102	100·52	3 9 10¼
October	7th	99½	99·44	3 11 3¾
November	4th	98	97·67	3 13 7½
December	2nd	98½	97·90	3 13 4
1906.				
January	6th	100½	99·57	3 11 2
February	3rd	102½	101·30	3 8 11¼
March	3rd	100	98·53	3 12 6¼
April	7th	100	99·94	3 10 8¼
May	5th	99½	99·17	3 11 8¼
June	2nd	99½	98·90	3 12 0½

The foregoing table indicates fluctuations in the stocks of the State during the twelve months, and it will be seen that at the close of the financial year the price remained the same as that obtained in July, 1905.

Transactions in Government securities on the Sydney Stock Exchange are almost entirely confined to the new funded stock, issued under Act 56 Vic. No. 1. Quotations for debentures and old funded stock are rare. The prices of the new 4 per cent. funded stock due 1912 for each month of 1905-6 will be found in the following table:—

Date.		Average Market Price.		Annual rate per £100 sterling yielded to investors if stock is held till date of maturity.
Month.	Day.	"Cum Dividend."	"Ex Dividend."	
1905.				£ s. d.
July	17th	102½	100·78	3 18 6
August	15th	100	99·95	4 0 11¼
September	18th	101	100·57	3 19 0¾
October	16th	103¼	102·52	3 13 2½
November	16th	103	101·93	3 14 10¾
December	14th	102½	101·12	3 17 3¾
1906.				
January	15th	103½	101·77	3 15 3¼
February	15th	102	101·95	3 14 8½
March	15th	104	103·64	3 9 3
April	10th	102½	101·85	3 14 9¼
May	15th	103	101·97	3 14 4
June	16th	103	101·62	3 15 5

The following table shows the amounts of stock registered in the State and in London. The amount available on the Sydney market is only £12,287,959, and of this sum £153,900 represents debentures, and £126,941 old funded stock, which, as already mentioned, are not quoted regularly:—

Class of Security.	Amount Registered in—				Annual Interest—		
	New South Wales.		London.	Total.	Amount payable in—		Total.
	Purchased from Trust Funds held by Treasury.	Taken up in Open Market.			New South Wales.	London.	
	£	£	£	£	£	£	£
Debenture Bonds	224,400	*153,900	†8,156,850	8,535,150	15,142	326,161	341,303
N.S.W. 4 per Cents.	403,249	126,941	......	530,190	21,208	......	21,208
N.S.W. Funded Stock—							
56 Vic. No. 1	1,147,260	1,402,090	......	2,549,350	101,974	......	101,974
58 Vic. No. 14	30,000	833,947	......	863,947	25,918	......	25,918
59 Vic. No. 6	880,000	452,945	......	1,332,945	39,988	......	39,988
60 Vic. No. 32	1,039,500	770,310	......	1,809,810	54,294	......	54,294
61 Vic. No. 48	26,000	1,742,456	......	1,768,456	61,896	......	61,896
62 Vic. No. 36	......	1,500,000	......	1,500,000	56,250	......	56,250
63 Vic. No. 42	......	228,000	......	228,000	7,980	......	7,980
64 Vic. No. 60	......	1,366,854	......	1,366,854	54,674	......	54,674
1 Edw. VII No. 62 ..	1,000,000	499,781	......	1,499,781	57,492	......	57,492
4 Edw. VII No. 31....	......	84,565	......	84,565	2,960	......	2,960
N.S.W. 1924 Stock	20,000	178,065	......	198,065	5,942	......	5,942
N.S.W. 1925 Stock	150,000	72,255	......	222,255	6,668	......	6,668
Inscribed Stock	......	......	53,512,500	53,512,500	......	1,858,869	1,858,869
Inscribed Stock (Advances to Settlers Act)................	305,000	120,050	......	425,050	12,801	......	12,801
Treasury Bills—							
53 Vic. No. 9	102,884	......	......	102,884	3,402	......	3,402
55 Vic. No. 7	......	......	‡4,000	‡4,000	......	......	......
59 Vic. No. 22	1,019,563	......	......	1,019,563	30,587	......	30,587
5 Edw. VII No. 30....	336,890	......	......	336,890	11,791	......	11,791
63 Vic. No. 46	......	‡1,900	‡1,500	‡3,400	......	......	......
64 Vic. No. 10	......	500,000	500,000	1,000,000	20,000	20,000	40,000
64 Vic. No. 68, and 1 Edw. VII No. 8	355,179	......	......	355,179	10,655	......	10,655
2 Edw. VII No. 94....	......	500,000	3,500,000	4,000,000	19,188	140,000	159,188
3 Edw. VII No. 14....	......	250,000	......	250,000	10,000	......	10,000
4 Edw. VII No. 8....	399,000	1,503,900	......	1,902,900	68,616	......	68,616
4 Edw. VII No. 31....	......	......	240,000	240,000	......	8,400	8,400
Total	7,438,925	12,287,959	65,914,850	85,641,734	699,426	2,353,430	3,052,856

* Includes £100 overdue. † Includes £3,150 overdue. ‡ Overdue.

The owners of debentures are not known, as the bonds are transferable by delivery; the locality of holders, however, can be established by the registration of the numbers of the interest coupons at the respective agencies.

CHARACTER OF STOCK ISSUED.

As will be seen on page 633, loans have been raised by Treasury bills, debentures, and stock. The Treasury bills are of a temporary character, and will in the course of a few years disappear from the statement of the public debt, either by substitution of ordinary stock in lieu of them when the temporary purpose for which they were issued has been served, or by redemption on maturity. The practice of issuing Treasury bills, either in anticipation of, or to make good, deficiencies in revenue, is an old-established one; but, as will be seen later on, they have been made to serve another purpose, and money has been raised by their sale to meet certain obligations for public works and redemptions. This is an innovation which could not be well avoided in the disturbed markets of the last few years. The Treasury bills are like the British Treasury bills in name only; but they have some points in common with the British Exchequer bills. The amount current on the 30th June, 1906, was

£9,214,816, of which sum £1,814,516 represents bills in aid of revenue, and £7,400,300 those issued for loan services and redemptions. From 1842 to 1883 the practice followed was to raise loans by debenture bonds. In the year last named, however, the Inscribed Stock Act was passed, in conformity with the provisions of the Imperial "Colonial Stock Act of 1877," and the system of raising loans by debentures terminated for the time being. During the financial year ended 30th June, 1905, however, debentures to the amount of £131,100 were raised locally under Act 64 Vic. No. 60, and under that Act and Act 1 Edw. VII No. 62, debentures to the amount of £2,000,000 were raised in London, both amounts maturing in 1915, and bearing interest at the rate of 4 per cent. per annum. The amount of debentures outstanding on the 30th June, 1906, was £8,156,850, which is nearly one-sixth of the inscribed stock current.

The issue of funded stock, which may be more appropriately termed registered stock, is regulated by four Acts—one passed in 1873, one in 1892, one in 1894, and the other in 1895. Stock issued under the former Act is interminable, while that issued under the more recent Acts may be redeemed at the option of the Government, at the expiration of twenty years from the date on which the Act was passed, on the Treasurer giving twelve months' notice of his intention to redeem.

FUNDED STOCK ISSUED LOCALLY.

Under the Act of 1873 the Government was authorised to raise by a local loan a sum of £509,780, the stock to be known as the "New South Wales 4 per cents." The amount of stock sold in order to raise this sum was £530,190, which, together with £2,700 raised under another Act, represents the total amount of the interminable stock of the State.

The Funded Stock Act of 1892 authorised the issue of stock to the amount of £3,000,000, redeemable in 1912. The rate of interest was fixed at 4 per cent., at a minimum price of par, while the purchasers were afforded the privilege of purchasing amounts as low as £10, or any multiple of that figure. The amount sold to 30th June, 1906, was £2,549,350, leaving stock to the amount of £450,650 yet to be raised.

The Loan Acts 58 Vic. No. 14, 59 Vic. No. 6, 60 Vic. No. 32, 43 of 1897, 36 of 1898, and 42 of 1899, passed in 1894, 1895, 1896, 1897, 1898, and 1899, respectively, provided for the establishment of other local stocks. The stocks under the first-mentioned Act are known as New South Wales 1924 Stock and Funded Stock, the latter running *pari passu* with the Stock floated under 56 Vic. No. 1, the amounts outstanding on 30th June, 1906, being £198,065 and £863,947 respectively; the stocks under the 1895 Act are known as New South Wales 1925 Stock and Funded Stock, the latter also being subject to the same conditions as that floated under 56 Vic. No. 1. The amounts outstanding on the 30th June, 1906, were £222,255 and £1,332,945 respectively. The stocks under the 1896 Act are known as New South Wales 1927 Stock and Funded Stock, and are subject to conditions similar to those imposed in respect of the issues under the 1894 and 1895 Acts. Up to the 30th June, 1906, sales of funded stock had been effected to the extent of £1,809,810. No sales of 1927 Stock have yet taken place. The rate of interest chargeable on the five loans just specified is 3 per cent. per annum. The stocks under the 1897 Act are known as New South Wales 1928 Stock and Funded Stock. Up to the 30th June, 1906, sales of funded stock had been effected to the amount of £1,768,456, bearing interest at the rate of 3½ per cent. per annum. No sales of 1928 Stock have yet taken place. The stocks under the 1898 Act are known as the New South Wales 1929 Stock and Funded Stock. Up to 30th June, 1906, sales of funded stock to the amount of £1,500,000, bearing interest at the rate of 3¾ per cent. per annum, had taken place. No sales of 1929 stock have yet taken place. The stocks under the 1899 Act are known as the New South Wales 1930 Stock and Funded Stock. Up to 30th June, 1906, sales of funded stock to the amount of £228,000, bearing interest at the rate of 3½ per cent. per annum, had taken place. No sales of 1930 stock have yet taken place. Under Act 64 Vic. No. 60, funded stock to the amount of £1,366,854 was raised locally to the 30th June, 1906, bearing interest at the rate of 4 per cent. per annum, £550,000 of which matures in 1907, and £816,854 in 1909. Under Act 1 Edw. VII No. 62, funded stock, to the amount of £1,000,000, was raised locally to the 30th June, 1906, bearing interest at the rate of 4 per cent. per annum, and £499,781, bearing interest at the rate of 3½ per cent per annum, both maturing in 1915. Under Act 4 Edw. VII No. 31, funded stock, to the amount of £84,565, was raised locally to 30th June, 1906, bearing interest at the rate of 3½ per cent. per annum, and maturing in 1921.

The Loan Act of 1899 gave authority for the local issue of £500,000 inscribed stock at 3 per cent., maturing in 1919, for the purpose of making advances to settlers. Under the Advances to Settlers (Amendment) Act, No. 106 of 1902, the issue was increased to £1,000,000. Of this stock, £425,050 were issued to the 30th June, 1906, of which £415,050 carries interest at the rate of 3 per cent. and £10,000 at 3½ per cent. per annum, both amounts maturing in 1919.

The Inscribed Stock Act was passed during 1883, and the first issue under the new conditions took place during the same year; but the Act coming into force shortly after the negotiation of the £2,000,000 debenture loan of 1882, the holders of the scrip had the option of exchanging the bonds for inscribed stock, a privilege which was availed of to the extent of £1,186,300. The total amount of inscribed stock issued to the 30th June, 1906, was £51,832,000, and the amount of the debenture bonds converted into the new scrip to that date was £1,680,500, making a total of £53,512,500 inscribed.

The Imperial Colonial Stock Act was passed by the Imperial Government in 1877, and provides for the inscription and transfer of stock raised in the United Kingdom, and for stamp duty to be levied thereon. It also defines the position of the British Government as regards Colonial indebtedness, and provides that every document connected with stock transactions shall have printed upon it a distinct intimation that no liability, direct or indirect, is incurred by the British Government in respect to such stock, unless the loan is under Imperial guarantee.

ISSUE OF TREASURY BILLS.

Consequent upon the great difficulty of raising money both in England and locally, and as there was litle probability of the sale of debentures in the year 1858, the Treasurer submitted proposals to meet the financial embarrassment of the time by the issue of Treasury bills which were to be legal tender for customs duties and the price of lands sold by the Crown. It was proposed to issue bills to the amount of £400,000, but only £40,600 were issued during 1858, bearing interest at 4d. per diem. The Treasury bills at the present time, however, are not the negotiable security that they were in those olden days. Nor is there much resemblance between New South Wales bills and the Exchequer bills of the British Treasury. The British Exchequer bills bear interest at a rate which is fixed from year to year, and at the end of every twelve months the holder has the option of retaining them or presenting them for payment at the Imperial Treasury. Hence the bills are readily saleable, and are frequently used in commercial transactions, combining as they do the double advantage of ready money and money bearing interest. But New

South Wales Treasury bills are now only payable at the Treasury at the expiration of the period for which they were issued, and they carry interest at a fixed rate for the whole term of their currency, and, in consequence, are little used in commerce.

The Treasury bills current, as previously mentioned, include those raised to meet accumulated deficiencies in revenue, and those issued for loan services. The first instalments of the former were issued during 1889 and 1890, under authority of an Act passed in the former year, the amount of the issue being £2,502,884. The bills were not issued to the public, as the Treasury had large sums belonging to various trusts awaiting investment. The amount of this deficiency loan outstanding at the middle of 1906 was £102,884. The second issue of deficiency bills took place in 1895, the total amount being £1,174,700; this sum, however, was found to be £150,000 in excess of that required, and, consequently, bills to that value were cancelled during 1896-7, while the amount outstanding on the 30th June, 1906, was £1,019,563. The bills were taken up by the Treasury as in the former case, and the same arrangements for the extinction of the amount have been made. The other class of Treasury bills was issued for the purpose of raising funds which, under other circumstances, would have been obtained by ordinary loan. As late as 1890, New South Wales could borrow in London on very favourable terms; but a reaction was setting in, and in 1892, when it became necessary to borrow, the conditions were most unfavourable. The State was entirely unprepared for the changed circumstances, as it was committed to engagements for the construction of public works, and contracts had been accepted on the assumption that funds would be available. To tide over the difficulty, the Government, during the years 1892-3, issued Treasury bills to the amount of £4,000,000, under the authority of the Act 55 Vic. No. 7, passed in December, 1891, and £3,250,000 were placed on the market, through the medium of the London and Westminster Bank, and the balance, £750,000, taken up by the Savings Bank of New South Wales. Of these bills there are £4,000 outstanding, overdue and not presented.

In 1900, the London market was again unfavourable to the flotation of a long-dated loan, owing to the South African war having affected the operations in stocks, and the Government was compelled to resort to the expedient of issuing Treasury bills. Accordingly, authority was obtained under Act 46 of 1899 for the issue of bills to the amount of £4,000,000, and of these £1,000,000 were sold in London in 1900 at 4 per cent., and £500,000 in Sydney at 3½ per cent. interest. The balance, viz., £2,500,000, were sold in 1901, £1,000,000 at 4 per cent. in London, while £1,500,000, in three instalments of £500,000 each, were issued locally at 3½ per cent. The proceeds of these bills have been used for the General Loan Services of the State. Of these bills there are £3,400 outstanding, overdue and not presented.

In 1902, Treasury bills were issued to the amount of £755,179 for the purpose of liquidating the balances of the General Post Office New Street Resumption Suspense Account, the Centennial Park Suspense Account, and to recoup the Railway Loan Redemption Fund, 53 Vic. No. 24, an amount of £150,000 applied towards the partial liquidation of the balance of debentures issued under Act 31 Vic. No. 11. These bills are held by the Government Savings Bank, and are being discharged by an annual payment of £100,000, the amount outstanding on the 30th June, 1906, being £355,179.

During the year ended 30th June, 1903, Treasury bills for public works were issued in London for £1,000,000, £600,000, and £200,000, carrying interest at the rate of 4 per cent., redeemable in 1907. Treasury bills were issued locally during the same period to the amount of £175,000, with interest at the rate of 4 per cent., £75,000 being redeemable in 1907 and £100,000 in 1908. During the year ended 30th June, 1904, Treasury bills were issued for public works in London for £200,000, £1,000,000, £250,000, and £250,000, carrying interest at the rate of 4 per cent., redeemable in 1907. Treasury bills to the amount of £500,000 were also floated in London in connection with the Darling Harbour resumptions, redeemable in 1907, and carrying interest at the rate of 4 per cent. Treasury bills for public works were raised locally for £325,000 and £125,300, respectively, the former carrying interest at the rate of 3¾ per cent., redeemable in 1907, and the latter 4 per cent., redeemable in 1908. In addition, in connection with the Darling Harbour resumptions, amounts of £260,000, £203,000, and £37,000 were raised locally, at the rate of 4 per cent., redeemable in 1907. During the year ended 30th June, 1905, Treasury bills to the amount of £124,700 were raised locally for public works at 4 per cent., redeemable in 1908. In addition, bills amounting to £402,900 for redemption purposes were raised locally, carrying interest at the rate of 4 per cent., redeemable in 1910.

During the financial year 1905-6, Treasury bills were issued to the amount of £336,890, to liquidate the deficiency at Consolidated Revenue to 30th June, 1905. These bills are held by the Government Savings Bank, and will be discharged by payment up to a sum of £50,000 per annum, provided the surplus on the Consolidated Revenue Fund is sufficient for that purpose.

The following table gives the particulars of the various issues of Treasury bills, all of which, with the exception of the amounts at 3, 3½, 3¾, and 4½ per cent., were negotiated in London :—

Date.		Class of Security.	Nominal Rate of Interest per cent.	Amount of Principal.	Net proceeds after expenses and accrued interest have been met.	Rate per £100 sterling.	
When Floated.	When Payable.					Paid by Government, allowing for redemption at par on maturity.	Yielded to original investors if stock is held till date of maturity.
				£	£	£ s. d.	£ s. d
1890	..	Treasury Bills (in aid of Revenue)	3	1,907,100	1,907,100	3 0 0	3 0 0
1891	..	do do	3	595,784	595,784	3 0 0	3 0 0
1895	..	do do	3	1,174,700	1,174,700	3 0 0	3 0 0
1892	1894	Treasury Bills (for loan services)	4	1,250,000	1,239,998	4 9 2¼	4 6 0¼
1892	1896	do do	4	1,000,000	998,750	4 1 5¼	3 19 10½
1892	1896	do do	4	263,500	262,510	4 2 9½	4 0 0
1892	1896	do do	4½	750,000	750,000	4 5 0	4 5 0
1893	1896	do do	4	10,800	10,759	4 3 5¼	4 0 0
1893	1896	do do	4	725,700	721,059	4 5 8¼	4 0 0
1899-1900	1902	do (for Public Works)	4	1,000,000	991,250	4 9 11¾	4 6 0½
1899-1900	1905	do do	3½	500,000	500,740	3 10 7½	3 9 6
1900-1901	1905	do do	4	1,000,000	986,250	4 8 1	4 6 1
1900-1901	1905	do do	3½	500,000	499,615	3 10 11¼	3 10 3¼
1900-1901	1906	do do	3½	500,000	498,562	3 11 9¾	3 11 4½
1900-1901	1906	do do	3½	500,000	496,829	3 13 3¼	3 12 9
1902-1903	1907	do do	4	1,000,000	996,250	4 2 9½	4 0 0
1902-1903	1907	do do	4	600,000	597,750	4 2 9½	4 0 0
1902-1903	1907	do do	4	200,000	197,750	4 6 9	4 6 0¾
1902-1903	1907	do do	4	75,000	75,000	4 0 0	4 0 0
1902-1903	1908	do do	4	100,000	100,000	4 0 0	4 0 0
1902	1910	do (in aid of Revenue)	3	755,179	755,179	3 0 0	3 0 0
1903-1904	1907	do (Darling Harbour Resumption)	4	500,000	486,875	4 14 9¾	4 12 9½
1903-1904	1907	do (for Public Works)	4	200,000	197,625	4 7 1¼	4 5 1
1903-1904	1907	do do	4	1,000,000	986,250	4 8 1¼	4 6 1½
1903-1904	1907	do do	4	250,000	244,607	4 12 3¼	4 10 3
1903-1904	1907	do do	4	250,000	244,062	4 13 5½	4 11 5
1903-1904	1907	do (Darling Harbour Resumption)	4	260,000	260,000	4 0 0	4 0 0
1903-1904	1907	do do	4	203,000	202,690	4 1 7½	4 0 0
1903-1904	1907	do do	4	37,000	37,000	4 0 0	4 0 0
1903-1904	1907	do (for Public Works)	3¾	325,000	325,000	3 15 0	3 15 0
1903-1904	1908	do do	4	125,300	124,450	4 4 4¾	4 0 0
1904-1905	1908	do do	4	124,700	124,700	4 0 0	4 0 0
1904-1905	1910	do (Redemption)	4	402,900	402,900	4 0 0	4 0 0
1905-1906	1907	do (Public Works) ..	3½	240,000	239,100	3 13 10½	3 10 0
1905-1906	1910	do (Redemption)	3½	500,000	499,869	3 10 8¾	3 10 0
1905-1906	1911	do do	3½	500,000	499,719	3 10 10½	3 10 0
1905-1906	1911	do do	3½	500,000	499,441	3 11 1	3 10 0
1905-1906	1913	do (in aid of Revenue)	3½	336,890	336,890	3 10 0	3 10 0

The 1890 and 1891 issues were originally placed at 4 per cent., but as the money representing their purchase was entirely at the disposal of the Treasury, being trust funds, the interest on all but £219,500 was reduced to 3 per cent. from 1st January, 1895. The amount at 4¼ per cent. was a loan by the Savings Bank of New South Wales.

ISSUE OF INSCRIBED STOCK LOANS IN LONDON.

Since 1891, six loans, forming part of the Funded Debt, have been placed in London. In October, 1893, a loan of £2,500,000, bearing interest at 4 per cent., at a minimum of 98½, was issued in London. The average price realised was £100 11s. 10½d. The total amount subscribed was £6,465,000, and the gross proceeds amounted to £2,514,861. The actual interest paid by the Government, after allowing for charges, and redemption at par on maturity, is £4 3s. 0¼d. per £100, while the return to investors was £4 1s. 8½d.

In September, 1894, a loan of £832,000, at 3½ per cent., was floated, for the purpose of renewing small loans maturing on the 1st January, 1895. The minimum was fixed at par, and the loan was subscribed over five-fold, the amount tendered being £4,268,000. The actual rate per £100 sterling payable by the Government, after allowing for charges and redemption at par on maturity, is £3 10s. 11d., while the rate yielded to investors, also allowing for redemption at par, is £3 9s. 4¼d.

In October, 1895, a loan of £4,000,000, at 3 per cent., was floated in London, of which no less than £3,352,400 were required for redemption purposes. The minimum price fixed was 94, and the average realised was £96 18s. 3½d. The actual rate paid by the Government per £100 is £3 4s. 3½d., while the yield to the investors is £3 3s. 2¼d.

The next flotation on the London market took place in January, 1898, when a loan of £1,500,000, bearing interest at 3 per cent., with a minimum of 99, was successfully floated, the gross proceeds being £1,506,269. The actual rate paid by the Government was £3 1s. 6d., and the yield to investors, allowing for redemption at par, was £3 0s. 4½d.

The next loan raised in London was the £4,000,000, at 3 per cent., floated in October, 1901. The minimum price fixed was 94, the proceeds of the loan to be expended upon works in connection with the resumption of water frontages, the construction of wharves, &c., at Darling Harbour, and upon other public works. The loan matures in 1935, and ranks *pari passu* with the New South Wales 3 per cent. 1935 stock already existing. The gross proceeds amounted to £3,760,000, and the amount credited to the General Loan Account, after deducting all charges and accrued interest, was £3,644,918, or £91 2s. 6d. per £100. The actual rate payable by the Government, allowing for redemption, is £3 8s. 3d., while the yield to investors is £3 6s. 4½d.

In May, 1902, a 3 per cent. loan of £3,000,000 was placed in London at a fixed price of 94½, the total applications being £35,420,000. The gross proceeds amounted to £2,835,000, and the net proceeds available for expenditure, after allowing for accrued interest, underwriting, and other expenses, were £2,727,191, or £90 18s. 1½d. per £100. The actual rate per cent. payable by the Government, allowing for redemption at par on maturity, is £3 8s. 7d. per £100, and the yield to investors £3 6s. 1¼d.

Under "Loan Act, 1902," a loan of £2,000,000 was placed in London early in 1906 at 3½ per cent. per annum, maturing in 1950. The gross proceeds were £1,990,000, and the net proceeds available for expenditure, after deducting brokerage, underwriting, and other expenses, was £1,940,438. The actual rate per cent. payable by the Government, allowing for redemption at par on maturity is £3 13s. 0½d., and the yield to investors £3 10s. 8d.

ACTUAL RATES OF INTEREST ON FUNDED DEBT LOANS.

The following table shows the cost to the Government and the yield to investors per £100 sterling on each of the issues from 1881 to 1906:—

Date.		Nominal Rate of Interest per cent.	Amount of Principal.	Net Proceeds after Expenses and Accrued Interest have been met.	Rate per £100 sterling.					
When Floated.	When Payable.				Paid by Government, allowing for redemption at par on maturity.			Yielded to original investors if stock is held till date of maturity.		
			£	£	£	s.	d.	£	s.	d.
			Debentures.							
1881	1910	4	2,050,000	2,095,973	3	18	6¼	3	17	11½
1882	1933	4	2,000,000	2,012,154	4	0	2½	3	19	9½
1904–5	1915	4	1,000,000	1,951,491	4	6	3	4	2	0
1904–5	1915	4	1,000,000							
1904–5	1915	4	131,100	131,100	4	0	0	4	0	0
			Inscribed stock.							
1883	1933	4	3,000,000	2,935,909	4	2	8¼	4	1	9¼
1883	1933	4	3,000,000	2,958,831	4	2	0	4	1	1
1884	1924	3½	5,500,000	5,024,458	3	18	4½	3	17	0½
1885	1924	3½	5,000,000	4,921,878	4	0	3	3	18	11
1886	1924	3½	5,500,000	5,074,026	3	17	7½	3	16	3¾
1888	1918	3½	3,500,000	3,543,177	3	9	5¼	3	8	2
1889	1918	3½	3,500,000	3,498,020	3	10	8	3	9	4
1891	1918	3½	4,500,000	4,186,144	3	18	0	3	16	5½
1891	1918	3½	494,200	459,732	3	18	0	3	16	5½
1893	1933	4	2,500,000	2,440,549	4	3	0¼	4	1	8½
1894	1918	3½	832,000	829,551	3	10	11	3	9	4¼
1895	1935	3	4,000,000	3,804,573	3	4	3½	3	3	2¼
1898	1935	3	1,500,000	1,479,746	3	1	6	3	0	4½
1895–6	1924	3	20,000	20,000	3	0	0	3	0	0
1895–6	1925	3	50,000	50,000	3	0	0	3	0	0
1896–7	1924	3	178,065	177,651	3	0	8	3	0	0
1896–7	1925	3	172,255	172,135	3	0	6	3	0	0
1898–9	1919	3	220,050	219,450	3	0	8¾	3	0	0
1901	1935	3	4,000,000	3,644,918	3	8	3	3	6	4½
1902	1935	3	3,000,000	2,727,191	3	8	7	3	6	1¼
1901–2	1919	3	25,000	25,000	3	0	0	3	0	0
1902–3	1919	3	120,000	120,000	3	0	0	3	0	0
1903–4	1919	3	50,000	50,000	3	0	0	3	0	0
1905–6	1950	3½	2,000,000	1,940,438	3	13	0½	3	10	8
1905–6	1919	3½	10,000	10,000	3	10	0	3	10	0
			Funded stock.							
1892	1912	4	227,000	226,596	4	1	0¼	4	0	0
1893		4	1,829,400	1,827,850	4	0	11	4	0	0
1894		4	307,430	313,410	3	18	2	3	18	2
1895		4	130,750	133,293	3	18	0½	3	18	0½
1895–6		3	180,000	180,000	3	0	0	3	0	0
1896–7		4	54,770	56,143	3	17	1	3	17	1
1896–7		3	863,947	862,776	3	0	8	3	0	0
1896–7		3	340,458	340,458	3	0	0	3	0	0
1897–8		3	812,207	811,982	3	0	5¾	3	0	0
1897–9		3	83,015	82,815	3	0	9¾	3	0	0
1898–9		3	952,716	951,466	3	0	8½	3	0	0
1898–9		3	280	280	3	0	0	3	0	0
1899–1900	1912	3	227,027	226,077	3	1	2	3	0	0
1900–1901	1912	3	539,753	539,653	3	0	5¾	3	0	0
1901–2	1912	3	300	300	3	0	0	3	0	0
1901–2	1912	3½	973,997	971,247	3	11	2¼	3	10	0
1902–3	1912	3½	267,302	265,802	3	11	11¾	3	10	0
1902–3	1912	3¾	1,500,000	1,500,000	3	15	0	3	15	0
1903–4	1912	3	7,000	7,000	3	0	0	3	0	0
1903–4	1912	3½	8,876	8,876	3	10	0	3	10	0
1903–4	1907	4	376,218	375,418	4	2	1½	4	0	0
1904–5	1912	3½	12,281	12,181	3	12	9½	3	10	0
1904–5	1907	4	173,782	173,682	4	1	2½	4	0	0
1904–5	1909	4	816,854	815,732	4	1	5¼	4	0	0
1904–5	1915	4	1,000,000	1,000,000	4	0	0	4	0	0
1905–6	1912	3½	506,000	506,000	3	10	0	3	10	0
1905–6	1915	3½	228,000	228,000	3	10	0	3	10	0
1905–6	1915	3½	499,781	497,831	3	11	6	3	10	0
1905–6	1921	3½	84,565	83,765	3	12	0¾	3	10	0

When the necessities of the Treasurer compelled him to borrow in 1891 to obtain funds to complete urgent public works, he was forced to accept a net price of 93, or £8 lower than the loan of 1888. In 1893, however, as previously mentioned, a 4 per cent. loan was floated at an average of £100 11s. 10½d., the actual rate paid by the Government after allowing for redemption at par being £4 2s. 4d.; while in 1894, the average price realised for the £832,000 3½ per cent. conversion loan was £101 14s. 8d., and the rate paid by the Government £3 10s. 3½d., which was about that given for the 1889 loan. The 3 per cent. loan floated in 1898, however, was by far the most successful, and the rates paid by the Government and yielded to the investor are even lower than those of the 1888 and 1895 loans, which were the most satisfactory till the 1898 loan was placed.

In the foregoing pages much has been said of the indebtedness of the State. It would, therefore, be only fair to say something of the resources on which the State may rely as security for the public creditors; but before examining the nature of these resources it may be well to recapitulate the liabilities outstanding. These are as follow:—

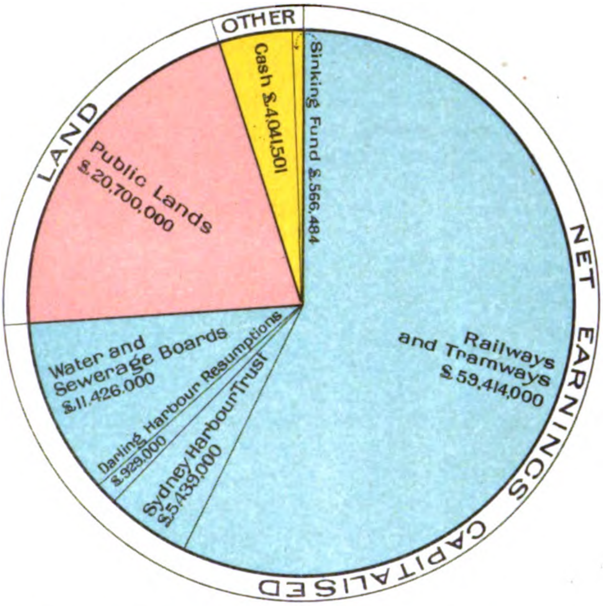
Public Debt, including Treasury Bills for loan services	£83,827,218
Treasury Bills in aid of Revenue	1,814,516
Uninvested Trust Funds	2,272,356
Total	£87,914,090

No allowance has been made in the foregoing figures for balances to credit of trust accounts, as money to the credit of the Trust Funds is a liability, whether represented by securities or cash. The interest payable on the sum of £87,914,090 outstanding amounts to £3,058,434. The assets of the Government of the State are the public works, the business undertakings of which yield an income of £2,669,779 after all charges of maintenance and working have been defrayed; and the public lands, of which 124,237,031 acres are leased for pastoral or mining purposes, and 16,499,823 acres sold on deferred payments, the balance due in respect of which amounts to £7,973,154, bearing interest at the rate of 4 and 5 per cent. From the public estate there is obtained an annual revenue of about £1,118,000, or, allowing £150,000 for administration, a net revenue of £968,000, so that the State has a revenue of £3,649,779, or £591,345 in excess of the whole charge for the public debt, without having to resort to taxation of any kind, and without parting with any more of the public lands. This fact alone ought to be evidence, if any such were wanted, of the ability of New South Wales to meet its engagements with the public creditors; but this is a point on which little need be said, for the security enjoyed by those who hold the stock of the State lies more in the wealth and integrity of the people than in the actual possessions of the Government.

The diagram opposite this page shows graphically how the assets of this State outweigh the liabilities. The liabilities are taken to be the Public Debt, and it will be seen that about 76 per cent. of the amount has been expended on directly productive works, over 8 per cent. on works indirectly productive, and less than 16 per cent. on works not productive. The assets have been calculated on the basis of actual returns, by taking the net return from the business undertakings of the State for the year 1905-6, and capitalising at 3½ per cent. In addition, the value of the land still remaining to the State has been estimated, and the actual value of sinking fund and cash in hand on the 30th June, 1906, included. The estimated value of the land is the rental received during 1905-6 on lands leased less the cost of the Department, giving a net return of nearly £446,000, capitalised at 3½ per cent., plus the balance outstanding on

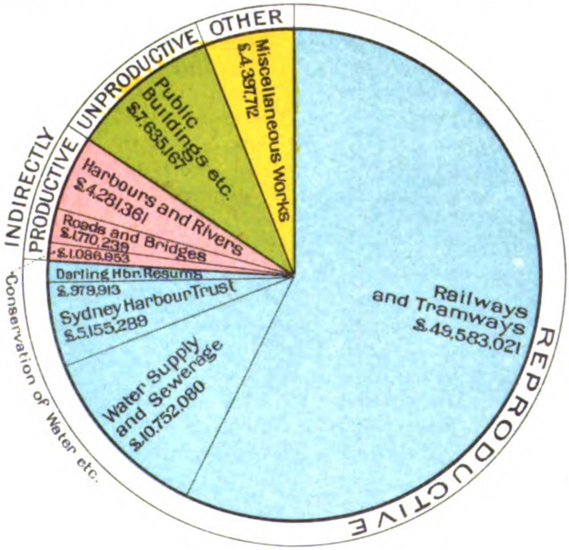
ASSETS OF THE STATE

The values shown in the diagram represent the net earnings during 19056 from revenue producing works capitalised at 3½ per cent. There are also shown the value of the public lands, cash in hand, and sinking fund. The valuation is at 30th June 1906 and the total is estimated at £102,515,985. Assets not yielding revenue directly, such as harbour and river works, roads and bridges, public buildings, and others, are not included.



LIABILITIES OF THE STATE

On 30th June 1906 the Public Debt was £85,641,735. The diagram shows the description of works on which this amount has been expended



Lithographed and Printed at the Department of Lands, Sydney, N.S.W. 1907
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lands alienated. There is little doubt that the value quoted in the diagram is understated. Altogether the assets are valued at £102,515,985, and the liabilities at £85,641,735, showing an excess of assets of nearly 17 millions sterling, which may be regarded as extremely satisfactory. It may also be pointed out that in estimating the assets no account was taken of works not directly producing revenue, such as Harbour Works, Roads and Bridges, Public Buildings, and others, although of course, indirectly, these works have been of great service in developing the country.

EFFECT OF FEDERATION UPON THE STATE FINANCES.

The question of the effect which the operations of the Commonwealth may have upon the finances of the State is of great moment, and one which will not lessen in importance with the passage of time. The deficits of some of the years, since federation became an accomplished fact, put the finances in a disturbed condition, and necessitated retrenchment in public expenditure. It cannot, however, be urged that this financial disturbance has any connection with the management by the Commonwealth of the Customs, Excise, Post Office, and other transferred services.

The expenditure of the Commonwealth is separated under two heads—"new" expenditure, that is to say, on services called into being since federation, and "other" expenditure, or expenditure on services transferred by the States to the Commonwealth. The "new" expenditure is charged to the States proportionately to population, and the cost of transferred services over and above the revenue derived therefrom being ascertained, the sum of "new" and "other" expenditure is deducted from the net revenue from Customs and Excise, and the balance handed back to the States.

The revenue collected by the Commonwealth in New South Wales from Customs and Excise is shown in the following statement, which, for purposes of comparison, also gives the revenue for the three years prior to federation. There are also shown, since 1900, the proportion of the population of the Commonwealth dwelling in New South Wales, and the proportion contributed by New South Wales to the total Customs and Excise revenue:—

Year.	Amount.	Per head of Population.			Proportion of Population.	Proportion of Customs and Excise Revenue.
	£	£	s.	d.	per cent.	per cent.
1898	1,551,827	1	3	8	....	....
1899	1,650,333	1	4	9	....	....
1900	1,778,993	1	6	3	36·15	23·01
1901 (half year)	1,019,008	0	14	11	35·92	23·91
1901-2	2,812,732	2	0	11	35·98	32·36
1902-3	3,478,742	2	9	8	36·17	36·81
1903-4	3,229,786	2	5	3	36·35	36·25
1904-5	3,033,617	2	1	8	36·57	35·04
1905-6	3,233,922	2	0	10	36·81	36·25
1906-7 (estd.)	3,404,000	2	4	7	37·05	37·40

It will be seen that the contributions have increased by over £1 per head. The average *ad valorem* duties paid in New South Wales in 1905 were 16·5 per cent. on dutiable goods, and 10·9 per cent. on all goods other than stimulants and narcotics. In 1900, the year prior to federation, the duties were 10·3 per cent. and 1·3 per cent. respectively.

The operations of the Post and Telegraph Department during the same period will be seen in the following table:—

Year.	Revenue.	Expenditure.
	£	£
1898–99	755,970	695,262
1899–1900	800,481	726,569
1900–01	833,942	789,290
1901–02	873,312	840,685
1902–03	906,798	890,203
1903–04	941,529	868,470
1904–05	980,151	894,690
1905–06	1,065,633	930,416
1906–07 (estd.)	1,075,000	947,054

The expenditure does not include the cost of new works, etc., amounting to about £68,000 per annum.

The total Commonwealth revenue and expenditure in New South Wales since the inauguration of the Commonwealth were as follows:—

Year.	Revenue.	Expenditure.		
		New.	Transferred.	Total.
	£	£	£	£
1901 (half year)	1,296,963	47,605	361,785	409,390
1901–2	3,694,267	99,252	1,213,281	1,312,533
1902–3	4,391,019	114,131	1,228,798	1,342,929
1903–4	4,176,391	167,043	1,318,052	1,485,095
1904–5	4,021,310	169,084	1,323,587	1,492,671
1905–6	4,314,830	187,340	1,385,561	1,572,901
1906–7 (estd.)	4,493,409	266,390	1,489,008	1,755,398

Section 87 of the Constitution Act, which is generally known as the "Braddon Clause," and which expires on the 31st December, 1910, provides that the Federal Treasurer is not entitled to retain more than one-fourth of the net proceeds of Customs and Excise for the purposes of defraying the expenses of the Commonwealth, the remaining three-fourths and as much more as the Treasurer does not require being handed back to the States.

The following statement shows, for each of the five years 1902-3 to 1906-7, during which the federal tariff has been in full operation—(*a*) the amount actually returned to New South Wales by the Commonwealth; (*b*) the amount which represents three-fourths of the net Customs and Excise revenue collected in New South Wales; and (*c*) the amount by which the sum actually returned was in excess of three-fourths of the Customs and Excise revenue collected:—

Year.	Amount actually received. (*a*)	Amount representing three-fourths of Net Customs and Excise Revenue. (*b*)	Excess of (*a*) over (*b*). (*c*)
	£	£	£
1902–3	3,053,133	2,554,621	498,512
1903–4	2,683,417	2,367,061	316,356
1904–5	2,529,070	2,219,553	309,517
1905–6	2,742,770	2,366,768	376,002
1906–7 (estd.)	2,743,288	2,489,765	243,523

In the above statement balances from previous year are included.

Up to 1904-5 the revenue showed a tendency to decrease, but it has since increased. Owing, however, to the increased expenditure, the surplus returned to the State has become smaller and smaller. This is a matter of serious consideration to all the States as their requirements are increasing yearly.

The expenditure will continue to increase on several accounts, chiefly owing to the increased naval subsidy, transferred debts, election expenses, increased sugar bonus, defence expenditure, High Commissioner, Arbitration Court, etc.

The time, therefore, will soon arrive when the amount to be returned will not exceed the statutory three-fourths of net Customs and Excise revenue.

Until the end of the book-keeping period the Commonwealth credits the actual revenue, debits the actual expenditure, and returns the balance. The return to each State, therefore, depends upon its contribution to the revenue, and especially to Customs and Excise, which comprises about 75 per cent. of the whole. At the expiration of the book-keeping period, under section 94 of the Constitution, the Commonwealth Parliament may provide, on such basis as it deems fair, for the monthly payment to the States of all surplus revenue. This period expired on the 8th October, 1906, but no alternative has yet been determined upon.

In the course of his Budget Speech, delivered in the House of Representatives on the 31st July, 1906, Sir John Forrest proposed, as a solution of the financial problem, that—

(*a*) Section 87 (Braddon clause) be not continued beyond the 31st December, 1910.

(*b*) That after 31st December, 1910, up to 31st December, 1920, and thereafter until Parliament otherwise provides, the net Customs and Excise revenue be divided between the States and the Commonwealth as follows:—

The States to have—

1. A guaranteed fixed annual payment for ten years to each State, on the basis of three-fourths of the net revenue from Customs and Excise which that State contributed (excluding the special revenue in the case of Western Australia) during the five years preceding the 31st December, 1910.
2. If three-fourths of the total net revenue from Customs and Excise in any year (not "ear-marked") exceeds the aggregate of the guaranteed fixed payments to all the States, the excess to be returned *per capita*.
3. A *per capita* return of three-fourths of any surplus of "ear-marked" net Customs and Excise revenue (new or additional), after providing for the specific purposes for which it was appropriated.

The Commonwealth to have—

1. Subject to the annual payment of the guaranteed fixed sum to the States, one-fourth of the net Customs and Excise revenue (not "ear-marked").
2. Any new or additional net Customs and Excise revenue "ear-marked" for specific purposes.
3. One-fourth of any surplus of "ear-marked" net Customs and Excise revenue, after providing for the specific purposes for which it was specially appropriated.

(*c*) That the book-keeping system should cease on 31st December, 1910.

It has been declared, chiefly by the smaller States, who will gain thereby, that sooner or later after the book-keeping period the Customs revenue must be pooled and distributed on a population basis. If this were done at once, it would be distinctly unfair to New South Wales and Western Australia. The position of Western Australia is due to the very large proportion of adult males in its population—68 per cent.—as against the general Australian average of 55 per cent. It therefore contributes largely to the revenue from stimulants and narcotics, and, in fact, all classes of goods. For this reason, it would be more equitable to exclude Western Australia from any discussion on the method of distributing the surplus among the States after the expiration of the book-keeping period.

The following tables are interesting, as showing how New South Wales would have fared during the last four years if the surplus had been distributed on a population basis—first, if Western Australia had been excluded :—

Year.	Amount actually received.	Amount returned on population basis.	Loss.
	£	£	£
1902-3	3,053,133	2,653,241	399,892
1903-4	2,683,417	2,420,266	263,151
1904-5	2,529,070	2,380,830	148,240
1905-6	2,742,770	2,558,277	284,493
1906-7 (estd.)	2,743,288	2,447,716	295,572

and second, if Western Australia had been included :—

Year.	Amount actually received.	Amount returned on population basis.	Loss.
	£	£	£
1902-3	3,053,133	2,876,423	176,710
1903-4	2,683,417	2,604,884	78,533
1904-5	2,529,070	2,559,859	*30,789
1905-6	2,742,770	2,690,179	52,591
1906-7 (estd.)	2,743,288	2,570,199	173,089

* Gain.

It is apparent from these two statements that a per capita distribution would be unfair to New South Wales. Victoria would also lose, but Queensland, South Australia, and Tasmania would gain. Excluding this method, the simplest one remaining is for the Commonwealth to guarantee to refund to the States each year a fixed sum, included in which ought to be the interest on the transferred properties. The case of Western Australia might be met by allowing her to continue her special tariff for a term after the book-keeping period, until conditions in that State should have approximated to those prevailing in the other States.

The advantages of having a fixed amount to be returned to the States by the Commonwealth are (*a*) that the Braddon clause need be no longer considered, and, therefore, the Commonwealth could raise duties on tea, kerosene, or any other article for old-age pensions or other purposes without having to return three-fourths to the States; (*b*) the States would always know their position, and would not have to wait for the Federal Treasurer to advise them of the amount likely to be returned; (*c*) no book-keeping would be necessary between the five States, but only in the case of Western Australia; (*d*) the present interstate jealousies as to one benefiting at the expense of another would be ended; (*e*) it would be necessary for the Commonwealth to make provision for the fixed amount; and (*f*) the present complaint of the Commonwealth that it cannot obtain any surplus for itself would be done away with. On the other hand, it would be necessary to make the agreement for a limited period, as some States will probably increase in population more rapidly than others, and so will contribute more largely to the revenue, and hence be entitled to a correspondingly larger return. The matter could then be considered and the amounts re-apportioned.

It has already been pointed out in this chapter that the State Treasurer has, by means of retrenchment, balanced his accounts, and it is well, perhaps, that this resolution has been taken, for a little consideration will show that it is idle, so far as concerns the State, to expect a return from the Commonwealth equal to satisfying its needs, on the basis of the expenditure of some of the past years. The following statement shows the amount of customs and excise duties required to be levied by the Commonwealth to enable the State of New South Wales to receive back sufficient to balance its finances in each of the financial years ended 30th June, 1902, 1903, 1904, 1905, and 1906 :—

	£
30th June, 1902	8,728,000
„ 1903	9,925,000
„ 1904	9,106,200
„ 1905	8,269,000
„ 1906	6,449,000

In order to illustrate the measure of responsibility attached to the State, it is pointed out that the amount of customs and excise duties that would have been required to be levied to balance the finances of 1899 totalled £5,031,000.

Seven years ago there was much talk about the surplus revenue of the State being needed to make up the requirements of the so-called necessitous States. During the three years preceding 1906 the revenue necessities of the mother State placed a demand upon the Commonwealth above that of some of the other States, and very little short of the requirements of the State standing most in need of revenue.

MINES AND MINERALS.

SEEING that the mining industry has already produced wealth to the extent of £171,000,000, it is almost impossible to form any adequate idea of the vast mineral resources awaiting development in the future. Very few countries, if any, have been endowed by Nature with such a diversity of mineral wealth in proportion to area as New South Wales, while experts maintain that so far only the merest fringe of the mineral deposits has been touched. It is only reasonable therefore to expect that as population increases and additional capital is expended in exploiting the various mineral fields at greater depths than is now possible by the ordinary miner, the mining industry will continue to be an important factor in maintaining and increasing the national wealth of the State.

In the early stages of its history, as far as outside knowledge of it was concerned, Australia was practically an unknown land, and it was not until the story of the discovery of large quantities of easily-won gold was noised abroad that the importance and possible future of the country were in any way realised. The discovery of gold quickly attracted a large population, thereby providing a profitable market for all descriptions of agricultural and pastoral commodities, and although the present output of gold is inconsiderable when compared with that of pastoral, agricultural, and dairy produce, the prosperity of Australia undoubtedly dates from the discovery of the precious metal.

The settlement of New South Wales has not been affected by the discovery of gold to the same extent as that of Victoria, yet the number of persons engaged in the search for the precious metal was at one time very considerable; but as the fields were despoiled of the wealth contained in the alluvial deposits lying to the hand of the digger, the number has steadily decreased. The depletion of the easily-obtained alluvial deposits, and the abandonment of a gold-field were not, of course, always a loss to the country, for, after the excitement had died out, the digger made way for the agriculturist, and resources of a more permanent character were developed in parts of the State which would otherwise have remained unknown to settlement for some considerable time. Gold-mining now requires the expenditure of capital for the erection of plant and gold-saving machinery; and the miner whose stock-in-trade consists solely of a pick, a shovel, and a tin dish, does not now find such opportunities for profitable labour as he did in the early days.

Prior to 1851, coal was the only mineral raised, the total quantity being 583,000 tons, valued at £254,000, but for the brief period embraced in the wonderful years that succeeded the memorable discovery of Hargraves, gold-mining was the leading industry of the State. Amongst the minerals now obtained, however, gold is of far less importance than silver and coal.

The industrial disputes in the coal trade, the steady fall in the value of coal (the price per ton averaging only 5s. 5d. in 1898), and the serious decline in the price of silver, copper, and tin, had a most disastrous effect on mining generally, but after the period of depression through which the mineral industry of the State passed, it is satisfactory to note that during the last few years substantial increases have been recorded in nearly all departments of mining.

Preliminary figures have just been published regarding the mineral output during 1906, and it is gratifying to notice that the yearly record of steady increases has remained unbroken since 1902, when the higher prices realised for the various metals began to exercise a stimulating influence on the industry. During the last five years the expansion has been very considerable, amounting to more than £2,810,000 but it is more noticeable during the last two years. Immediate prospects are distinctly promising—in fact, from present indications, it would appear that still further increased outputs in all the principal departments of mining may be confidently expected during the present year.

MINING ON CROWN LANDS.

It is only the holder of a miner's right who may take out a gold-mining lease. An ordinary lease may be granted for any area not exceeding 25 acres, and the term for which it may be taken out ranges from one to fifteen years, but is renewable for a further period of fifteen years. The annual rent payable at present is £1 per acre (or portion thereof), but this will be reduced shortly to 5s. per acre under the provisions of the Mining Act of 1906. When application is made for the lease, the first year's rent must be paid, together with a survey fee ranging in amount from £1 for areas up to 1 acre to £3 10s. for 20 to 25 acres. The labour to be employed is determined by the Secretary for Mines, but the minimum generally is one man for every 2 acres held under lease. Special leases of increased areas may also be granted for gold-mining purposes where unusual difficulties exist in working the ground. The Prospecting Board considers each application, and recommends to the Minister the area to be granted, the rent, royalty, and labour conditions to be fixed, and the amount of capital to be expended by the lessee.

A mineral lease of Crown lands is granted for the purpose of mining for any mineral other than gold, and it is not necessary that the applicant for such should be the holder of a miner's right or a mineral license. In the case of coal the maximum area which may be leased is 640 acres; for other minerals the area may not exceed 80 acres, but there is nothing to prevent a person holding more than one lease. The term for which a lease may be granted ranges from one to twenty years, and the annual rent, which is payable in advance, is at the rate of 5s. per acre. Coal and shale mining leases carry a royalty of 6d. per ton upon all coal or shale raised, but if the royalty in any year exceeds the rent paid, the excess amount only is payable as royalty. Reserved lands may be leased subject to the same conditions as Crown lands, unless the mineral sought is coal, in which case the annual rental is fixed at 2s. per acre if the surface of the land or any part of it is required, 1s. 6d. per acre where no surface is required, and 1s. per acre if wholly under water. The royalty payable, however, is the same as that charged in leases of Crown lands. The labour conditions of the leases mentioned are proposed by the applicant, and are subject to approval by the Secretary for Mines. All dealings in connection with these leases are the same as in gold-mining leases. The holder of a miner's right, or of a lease under the Act of 1874, may be granted an authority to mine for minerals under roads, streets, navigable waters, or commons or reserves. For coal the rent is 2s. per acre per annum, with a royalty of 6d. per ton of large coal and 3d. per ton of small coal. If the royalty exceeds the rent, then the former only is payable. In the case of other minerals except gold, the royalty payable is at the rate of 5 per cent. on the value, with a rent similar to that charged for coal lands. In the case of small areas the holding of a mineral license may be imposed as a condition in lieu of payment of rent.

Special provision is also made for prospecting and mining on Crown lands held under tenure as residential, settlement, and special leases; also for the securing of areas required for races, dams, tramways, &c., in connection with mining operations.

A miner's right is issued for a period of one year or of six months from any date, the fees payable being 5s. and 2s. 6d. respectively. It secures to the holder the privilege of entering upon Crown lands and mining for gold or any other mineral; of occupying a residence area of a quarter of an acre; of diverting and using water for mining and domestic purposes; and of using, for mining or building purposes, timber, bark, stone, and gravel, if these are not on exempted or reserved lands, or within the operation of a prohibitory proclamation. In searching for gold, the holder of a miner's right may mark off on alluvial ground a prospecting protection area ranging from 600 feet long by 1,200 feet wide to 1,400 feet long by 2,800 feet wide, according to the distance from the nearest protection area or mining tenement producing gold; and when payable gold is struck he is entitled to take up, as a reward for his discovery, a prospecting claim half the length and a quarter of the width of the protection area. Other forms of occupation of alluvial ground under a miner's right are block claims, frontage areas and claims, extended alluvial claims, and river and creek claims, all of which are governed by special regulations. In connection with quartz-mining, the prospecting protection area cannot exceed a width of 400 feet; but the length ranges from 840 feet to 960 feet, according to the distance from the nearest mining tenement producing gold. The claim which may be marked off when payable gold is discovered, is half the length and the full width of the protection area. Ordinary and extended quartz claims may also be taken up under miner's right; and special regulations govern water rights, residence areas, and machinery areas, the last mentioned entitling a person erecting quartz-crushing, or other machinery for extracting gold, to take up an area of 2 acres. The number of miners' rights issued during 1906 was 24,542, and the revenue derived therefrom amounted to £3,918.

Mineral licenses, which will be abolished under the new Act, are used in connection with the search for and winning of minerals other than gold on Crown lands, and are issued, on the payment of the sum of 5s., for twelve months, and 2s. 6d. for six months, as from date of issue. A miner's right, however, also confers on the holder all the rights and benefits secured by a mineral license. For the purpose of searching for opal, the holder of a mineral license or a miner's right is permitted to take possession of and to occupy 400 feet by 400 feet of Crown lands, and for other minerals, with the exception of gold, an area of 40 acres; but the area which may be occupied for the purpose of mining for and winning minerals is much less, being 100 feet by 100 feet in the case of opal, and 4 acres in the case of other minerals. A mineral prospecting area is the term applied to land occupied in the search for minerals, and a mineral claim to that occupied for the purpose of mining and winning minerals. For the purpose of searching for coal, the holders of sixteen miners' rights or mineral licenses may conjointly take possession of not more than 640 acres as one mineral prospecting area; and for any other mineral than coal, gold, or opal, the holders of two rights or licenses may take possession of not more than 80 acres. The extent of land which may be taken possession of conjointly as a mineral claim is not more than 12 acres, by the holders of three miners' rights or mineral licenses, in the case of minerals other than coal, gold, or opal; and not more than 200 feet by 200 feet, by the holders of four miners' rights or mineral licenses, in the case of opal. Within twenty-eight days of the discovery of opal, the holder of a prospecting area must mark off and occupy a mineral claim not exceeding 200 feet by 200 feet, which must be worked by not less than two men. In the case of other minerals, application must be made within thirty days of discovery for the conversion of the prospecting area into a mineral leasehold. A holder of a mineral license is allowed to occupy, for the purpose of residence, an area of land not exceeding in extent a quarter of an acre, and is entitled to the use of water under certain conditions. In the course of the year 1906, 847 mineral licenses were issued, the revenue derivable therefrom being £208.

Business licenses, operating upon gold-fields only, are granted at the rate of 20s. per annum, or 10s. for six months from date of issue, and entitle the holder to occupy, for the purpose of residence or of carrying on business, one-quarter of an acre in township sites, or 1 acre on other Crown lands. Within twenty-eight clear days after the issue of the certificate of conditional registration, improvements in building must be made to the value of £10, otherwise the area taken up is deemed to be abandoned. During the year 1906, there were issued 1,924 business licenses, the fees therefrom amounting to £1,124.

At the close of the year 1906, the area held under lease to mine for gold was 11,902 acres, and for other minerals 98,783 acres. These figures include 5,824 acres and 3,167 acres respectively, being the areas held under special lease for gold and tin dredging. There were also 1,011 acres leased for purposes of water conservation, making a total of 111,696 acres of Crown lands held under mining lease. Under application to lease, the area of auriferous Crown lands held was 945 acres, and of lands upon which other minerals were being sought, 49,846 acres, while 6,604 acres were under application for dredging purposes, in addition to 1,373 acres required as sites for races, dams, and machinery, giving a total of 58,768 acres of Crown lands held under application to lease. It is impossible to state definitely the area actually held under mining occupation in this State, as it is not compulsory in some instances for the holders of areas held under certain regulations to register the same. In addition to the areas shown above to be held under lease, or application to lease,. it is estimated that a further area of 41,447 acres of Crown lands, exclusive of reserved lands, was occupied under Mining Board and Mineral License regulations, &c., making a total of 211,911 acres of Crown lands occupied for mining purposes.

MINING ON PRIVATE LANDS.

Certain of the Crown lands of the State have been alienated from time to time, subject to various reservations in respect of gold and other minerals which might afterwards be found therein. Other lands, again, have been alienated without any such reservation; but as it is the established law that the right to the royal metal gold does not pass from the Crown unless by express conveyance, the gold has remained the property of the State on all alienated lands. The scope of the Mining on Private Lands Act, passed in June, 1894, was limited to the mining for gold, silver, lead, tin, and antimony; but the provisions of this Act were extended by the Mining on Private Lands Amendment Act of 1902, to include any other substance (except coal or shale) which the Governor may proclaim to be a mineral. All lands alienated, or in process of alienation, and all lands conditionally leased, are open to mining for gold, but to mining for other minerals, those lands only are open in respect of which the rights are (or will be) reserved in the Crown grants. There are, however, certain necessary reservations. Lands within the boundaries of any town or village, and Crown lands held under tramway, irrigation, power or water supply leases, or reserved for various public purposes, are not open for mining, unless otherwise proclaimed by the Governor. The consent of the owner has to be obtained before mining will be permitted on land within 100 yards of a garden or orchard, or within 200 yards of the occupier's residence; such consent is also necessary to mine on or under the surface of land on which any substantial building or other valuable improvement is erected or constructed.

The holder of a miner's right or a mineral license may obtain an authority permitting him to enter into and upon any private lands open to mining. The currency of the authority is fixed by the warden, who also defines the area, having regard to the nature of the deposit to be sought for, and mining operations may be carried on subject to the payment of rent and compensation fixed by the warden. The rent is payable half-yearly in advance. The area must not exceed 20 acres in the case of ordinary auriferous lands, or 40 acres where the natural conditions render mining operations difficult and costly; while for other minerals the maximum area is 80 acres. These authorities may be converted into leases, the annual rent payable being £1 per acre, half of which, together with the survey fee, ranging from £1 for 1 acre to £5 15s. for 80 acres, must be lodged with all applications for general leases. The term of the lease cannot exceed twenty years, but subject to certain conditions renewal for a similar period may be obtained. In gold-mining, one man must be employed for every 5 acres; and in mining for all other minerals, one man for every 10 acres. Owners of private lands may obtain special leases for mining purposes without payment of rent. They are also privileged to enter into agreements with holders of miners' rights or mineral licenses for the latter to take possession of the land for mining purposes as if it were Crown land. In such cases it is not necessary to take out a lease under the Act; but the land must be held and worked subject to the regulations of the Mining Board in force for the time being. With the concurrence of the Secretary for Mines, owners may also make agreements with respect to lands other than alluvial, or grant leases of the same, the area and labour conditions being similar to those fixed and imposed in connection with other leases granted under this Act. Every agreement or lease of this kind must be registered within fourteen days.

A prospecting license may be issued to the holder of a miner's right empowering him to enter upon any private lands open to mining, and not otherwise utilised under the Act, for the purpose of digging and searching for gold. Before mining operations are begun, a deposit must be paid to cover any damage which may be caused to the surface of the ground. If payable alluvial gold is discovered, the land may be resumed by the State, the discoverer having a preferent right to a prospecting claim.

At the close of the year 1906, the area of private lands held under lease was 7,756 acres, of which 4,868 acres were held under gold lease, 1,638 acres under mineral lease, and 1,250 acres were being mined for gold in conjunction with other minerals. There were also 248 acres leased for water conservation and machinery sites, making a total of 8,004 acres of private lands under lease for mining purposes, while 1,717 acres were held under application to lease. On the same date, permits to mine for gold on 33 acres of reserved lands were in existence, while the area of reserved lands held under authority to mine for other minerals was 64,254 acres, of which 32,064 acres were under application. In addition there were 12,980 acres held under permit to remove minerals from alienated lands, 31,912 acres under agreement with owners, and 13,015 acres under authority to enter private lands, making a total of 131,915 acres of private or reserved lands held under some form of tenure for mining purposes.

DREDGING LEASES.

The Gold and Mineral Dredging Act, which was assented to on the 20th December, 1899, provides for the granting of leases for mining for gold or other minerals by dredging, pumping, sluicing, or any other method. With the exception of land held under or by virtue of any other Act relating to mining, leases may be granted in respect of all lands, whether alienated or belonging to the Crown, forming the bed of any river or lake, or under any tidal water, or under the ocean contiguous to the coast line, or of the land contiguous to such place. The area of the lease, which is limited to 100 acres, is fixed in proportion to the labour employed, and the amount of working capital, and must not exceed 10 acres for each man employed, and 1 acre additional for every £50 expended or to be expended in the purchase of machinery and appliances for the purposes of working the area. The labour employed must not, however, be less than seven men to 100 acres, but in certain circumstances the Secretary for Mines has power to modify this condition. The currency of the lease is for fifteen years, but it may be renewed for a similar period. A person desirous of applying for a lease must be the holder of a miner's right or a mineral license, but in the case of private lands, or land held from the Crown under tenure other than for pastoral purposes, an authority to enter has to be obtained from the warden, the applicant depositing £10 as evidence of *bona fides*. The authority is available for fourteen days from date of issue, and during this time the land desired to be leased must be marked out, but mining operations may not be commenced till the lease has been granted. The annual rent payable for Crown lands is 2s. 6d. per acre, but in the case of private lands the rent and compensation payable to the owner for damage likely to be caused by the carrying on of mining operations is assessed by the warden. Royalty at the rate of £1 per cent. is payable to the Crown for all minerals won from lands held under the Dredging Act.

SYNOPSIS OF MINING ACT, 1906.

The Mining Act, 1906, which came into operation on the 15th July, 1907, consolidates and amends the existing Acts relating to mining on Crown and private lands. Amongst the more prominent alterations which will be effected by this Act, the following may be mentioned:—

The Mining Board regulations, and the various sets of regulations made under the repealed Acts, will be superseded by regulations to be made under the new Act. They will practically constitute the law relating to holdings under miners' rights, besides prescribing conditions relating to mining leases; in each case the existing provisions are simplified and liberalised. These regulations, however, cannot be completed until the Act itself comes into operation.

With the one exception of conditional leases, the definition of Crown land is extended to embrace all lands held under lease from the Crown, including lands reserved, dedicated, or appropriated for any public purpose, and any other land the Governor may declare by proclamation to be Crown land.

"Minerals" are defined, and include all minerals already proclaimed under the Mining on Private Lands Acts, with the addition of "mineral oils." Any other substance may be declared a mineral by proclamation.

The definition of "mining purposes" is extended to cover all operations in connection with mining—such as the construction of dams and tramways, erection of buildings and machinery, treatment of tailings, and any other work which the Governor may declare to be a mining purpose.

Mineral licenses are abolished, as miners' rights will in future apply to mining for both gold and all other minerals.

The term for which a miner's right or business license may be taken out is extended to twenty years, and the privileges conferred by the former include the grazing of horses, &c., on Crown lands, while the holder is following the occupation of a miner or prospector, but not more than one tenement of the same class may be held under one miner's right.

Residence areas outside of towns may be increased (from a quarter of an acre) to 2 acres, subject to the warden's approval.

Mining under improved Crown lands is permitted upon payment of compensation, to be assessed by the warden, and any holder of a miner's right may obtain an authority to prospect Crown lands, whether exempted from occupation or not, on terms fixed by the Minister.

Lands held under lease from the Crown for other than pastoral purposes (hitherto exempted from leasing) may be leased, subject to compensation for damage occasioned to any part of the surface occupied.

The provisions regarding gold and mineral leases are rendered uniform, and a miner's right is not required to be held by an applicant for a mining lease. Leases are divided into two classes—mining leases, and leases for mining purposes. The latter are limited to the surface and a specified depth, and no mineral may be removed therefrom; but mining leases can be granted of the land thereunder.

The annual rent of gold-mining leases is reduced from 20s. to 5s. per acre, and the term has been increased from fifteen to twenty years.

The maximum area of mineral leases is unaltered, except as regards opal, which cannot exceed 10 acres, as compared with 80 acres for other minerals. The rent is 5s. per acre per annum (as at present).

The yearly rent of coal and shale leases is reduced to 1s. per acre, with royalty of 6d. per ton on shale and large coal, and a reduced royalty of 3d. per ton on small coal. The Minister may remit the royalty payable on coal used for raising steam at any colliery.

The provisions relating to special leases are extended to include minerals as well as gold, and leases for sinking on deep leads, or in wet or difficult ground, can be obtained under liberal conditions.

All leases under the Act may be renewed for twenty years, but such renewals shall be subject to the Acts and regulations in force at the time of renewal.

Leases under repealed Acts may be renewed subject to the conditions of such Acts, excepting as regards payment of any fine upon renewal, but gold-mining leases shall be at the reduced rental.

Labour conditons shall be determined by the Minister in accordance with the regulations, and special concessions are to be allowed as regards suspension of and exemption from such conditions.

In connection with mining on private lands, a deposit of 5s. shall be lodged with every application for an authority to enter upon private land (other than an interim authority), and this shall be applied towards payment of compensation, or, in the event of the application not being proceeded with, forfeited to the Crown.

A lease of enclosed land under cultivation may be granted, with access to a limited portion of the surface only, and subject to compensation for damage.

The area of leases to mine for gold is extended to 25 acres, but rent shall be payable to the owner only in respect of the surface granted.

A royalty of £1 per cent. of the gross output of gold or minerals shall be payable to the Crown, but the lessee shall be entitled to deduct from the total sum payable by way of royalty in any one year a sum equivalent to the amount paid by him as rent for that year.

Agreements between any owner of private land and a miner must not contain any stipulation for payment to the owner of royalty.

Lessees of dredging leases will also be permitted to deduct any sum paid by way of rent from the royalty payable to the Crown.

MINERS EMPLOYED AND PRODUCTION.

The following table gives the approximate number of persons actually engaged in the principal departments of mining during each of the past eight years. The figures are given on the authority of the returns furnished to the Mines Department:—

Mineral.	Miners employed at end of each year.							
	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.
	No.	No.	No.	No.	No.	No.	No.	No.
Gold	19,348	17,958	12,064	10,610	11,247	10,648	10,309	8,816
Silver and Silver-Lead	7,893	8,196	6,298	5,382	6,035	7,071	7,887	9,414
Tin	1,489	1,413	1,428	1,288	2,502	2,745	2,884	3,795
Copper	2,369	3,334	2,964	1,699	1,816	1,850	2,171	3,047
Coal	10,339	11,333	12,191	12,815	13,917	14,034	14,019	14,929
Shale	184	158	224	299	200	112	118	270
Other Minerals	1,198	1,353	1,446	1,602	1,842	1,377	1,544	2,275
Total	42,820	43,745	36,615	33,695	37,559	37,837	38,932	42,546

During a portion of the period covered by the above table, it will be seen that there was a marked falling-off in the number of men engaged in mining as compared with the earlier years. The highest point was reached in 1900, when the industry found employment for 43,745 miners, but in the two subsequent years large decreases were recorded, mainly owing to long continued dry weather. From 1903 onwards, however, there has been a steady increase in the miners employed, who, at the end of 1906, numbered 42,546, or only 274 less than those similarly employed during 1899. With the exception of 1903, the gold-miners have steadily decreased year by year, till at the end of 1906 they numbered only 8,816, or considerably less than half the number so employed only six years ago. This apparent neglect of gold-mining is, no doubt, due to some extent to the diversity of the mineral wealth of this State, for during the past few years most of the available capital has been directed towards the development of other minerals, as is indicated by the satisfactory increase in the number of men mining for silver, tin, copper, and coal. The reefs on most of the gold-fields have been worked, as far as practicable, by the ordinary miner, and the introduction of capital is necessary for their further development. Fossicking also has not been followed so persistently as in the earlier years. In comparing the detailed returns for 1906 with those of the previous year, it will be found that there were 657 less men employed in quartz-mining and 836 in alluvial-mining. This falling-off is attributable to the decrease in the number of small gold-mines and claims worked, and the cessation of active prospecting and fossicking operations during the latter part of the year, due doubtless to the greater activity manifested in the other branches of mining.

The value of mining plant and machinery may be set down approximately at £3,424,000, of which £1,079,000 represents the value of the winning, weighing, and ventilating plant and machinery used in connection with coal and shale mines. The value of machinery in operation on other mineral fields is shown below:—

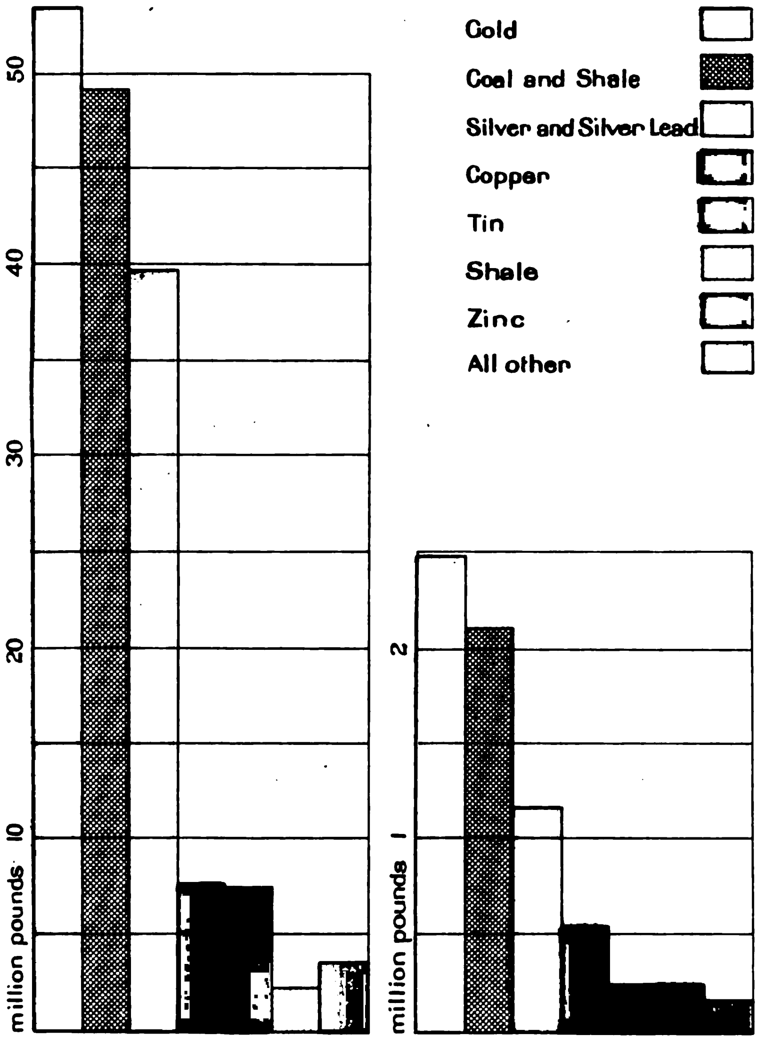
Classification.	Value at 31st December, 1906.
	£
Gold-Dredging Plants	212,000
Other	649,000
Silver and Lead	950,000
Copper	218,000
Tin-Dredging Plants	89,000
Other	30,000
Other Metals or Minerals	197,000
	£2,345,000

The value of machinery and plants in operation at the mines is, as stated above, £3,424,000; but it should be explained that this sum does not include the value of the large smelting plants in operation at Cockle Creek, and Woolwich, the copper reducing and refining plants at Lithgow and Newcastle, and the plant at the Eskbank iron-works, the total value of which is estimated at not less than £160,000. The total is exclusive also of value of plant used for conveying products from the mines to railway station or wharf, which, in the case of coal and shale mining, is set down at £912,000.

The summary given below shows the value of the production of the various minerals since their first discovery, as well as of minerals won in the years 1903, 1904, 1905, and 1906:—

Mineral.	Value.				
	During 1903.	During 1904.	During 1905.	During 1906.	To end of 1906.
	£	£	£	£	£
Gold	1,080,029	1,146,109	1,165,013	1,078,866	54,314,152
Coal	2,319,660	1,994,952	2,003,461	2,337,227	50,356,743
Silver and silver-lead	1,501,403	2,065,540	2,494,052	2,862,973	42,705,724
Copper, Matte, and Ore	462,640	406,001	527,403	789,527	8,472,629
Tin and ore	150,208	188,377	226,110	255,744	7,744,509
Kerosene Shale	28,617	26,771	21,247	28,470	2,135,445
Coke	108,764	110,692	100,306	110,607	1,106,365
Noble Opal	100,000	57,000	59,000	56,500	989,099
Zinc (Spelter and Concentrates)	86,587	117,978	221,155	292,806	890,274
Limestone flux	14,221	14,434	9,519	7,463	617,469
Lead (pig, &c.)	38,586	65,964	2,657	1,084	531,035
Antimony and ore	135	503	5,221	52,645	253,279
Bismuth	9,537	12,329	20,763	5,700	114,614
Diamonds	9,987	11,620	3,745	2,120	104,089
Chrome iron ore	7,342	1,268	62	15	101,003
Alunite	6,212	925	6,750	4,637	82,597
Ironstone flux	15,834	6,628	4,525	723	61,298
Wolfram	608	8,432	7,361	9,057	27,311
Scheelite	140	1,406	10,122	7,647	23,730
Platinum	1,061	1,070	825	623	17,540
Molybdenite	4,458	2,726	2,507	4,798	16,330
Iron oxide	1,182	239	417	336	14,128
Cobalt	1,570	60	....	....	7,955
Manganese ore	254	....	....	....	1,655
Sundry minerals	8,477	2,237	4,860	3,148	120,340
Total Value .... £	5,957,512	6,243,261	6,897,081	7,912,716	170,809,313

VALUE OF MINERALS WON


To end of 1905
Total — £162,896,597

During 1905
Total — £6,897,081

Lithographed and Printed at the Department of Lands, Sydney, N S W 1907
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It will be seen that to the end of 1906 the State has produced various minerals of the total value of nearly 171 millions sterling. In connection with this estimate of production, it may be explained that the figures differ slightly from those issued by the Mines Department. Such items as scrap-iron, Portland cement, and lime have been included in the report of the Mines Department, but these have been rejected in preparing the above statement, as these products are considered in connection with the statistical returns of manufactories and works. For the sake of comparison, however, the following table has been prepared, and the value of each of the items mentioned is given for the same periods as shown in the previous summary:—

Article.	Value.				
	During 1903.	During 1904.	During 1905.	During 1906.	To end o 1906.
	£	£	£	£	£
Iron made from scrap	85,790	80,504	85,693	112,848	1,272,501
Portland cement	55,740	54,750	88,100	128,487	373,577
Lime	17,213	13,250	15,019	15,573	104,991
Totals	158,743	148,504	188,812	256,908	1,751,069

METALLIC MINERALS—GOLD.

Amongst the metallic minerals found in the State, gold occupies a foremost place, both on account of the quantity which has been raised, and of the influence which the discovery of the royal metal has had on the settlement of the country. The date of the discovery of gold in New South Wales was for a long time the theme of much controversy, and the question as to the original discoverer was long disputed. It is now agreed, however, that the existence of gold was known to the authorities during the early days when the State was a convict settlement, but for obvious official reasons the matter remained secret. The first authentic record of its discovery is contained in an extract from Assistant-Surveyor James McBrien's Field-book, bearing date 15th February, 1823, in which the following note appears:—"At 81 chains 50 links to river, and marked gum-tree—at this place I found numerous particles of gold in the sand and in the hills convenient to the river." The river referred to is the Fish River, at about 15 miles from Bathurst, not far from the spot to which the first gold-rush was made twenty-eight years afterwards.

In 1839, Count Strzelecki found gold in the Vale of Clwydd, and communicated the discovery to Governor Gipps; but he was requested to keep the matter secret, lest the knowledge of the existence of the royal metal should imperil the safety and discipline of the settlement. The Rev. W. B. Clarke also found gold in 1841, in the Macquarie Valley and the Vale of Clwydd, and expressed his belief that the precious metal would be found abundantly dispersed throughout the territory. But it was not until the year 1851 that payable deposits were proved to exist in New South Wales, and this important discovery was due to Mr. E. Hammond Hargraves, who, on his return some time previously from California, pointed out to the Government the localities in which he had found payable deposits of alluvial gold, viz., at Lewis Ponds, Summer Hill Creek and the Macquarie River, in the districts of Bathurst and Wellington. Prospecting operations followed in the neighbourhood, with the result of which everyone is now familiar. A few weeks later, rich deposits were discovered at Ballarat, Mount Alexander, and other places in Victoria; and the world witnessed a gold rush from all parts of the globe to these States, similar to that which some years before had taken place to California.

Native gold is the only true mineral species of gold which has so far been found in New South Wales, and was first met with in easily worked alluvial deposits. These diggings have, until recent years, attracted a large numbers of miners, as the gold is obtained without costly appliances; but however rich they may be, alluvial deposits are very soon worked out, their area generally being of limited extent. In such deposits gold is found associated with a variety of minerals. It is found in the shape of grains and nuggets, water-worn in appearance, and sometimes of considerable size. Though New South Wales has not yielded nuggets of such an extraordinary size as those found in Victoria, yet some splendid specimens have been unearthed at various times. In July, 1851, a mass of gold was found at Hargraves which weighed 106 lb., or 1,272 oz. This, however, though called a "nugget," was really a piece of reef gold. In November, 1858, at Burrandong, near Orange, another nugget was found, which when melted at the Sydney Mint gave 1,182 oz. 6 dwt. of pure gold, of the value of £4,389 8s. 10d. A third nugget called the Brennan, was sold in Sydney in 1851 for £1,156. In 1880 and 1882 several nuggets which were unearthed at Temora weighed from 59 to 139 oz.; and in 1887 nuggets were found by fossickers in various parts of the country, four of which, weighing respectively 357 oz., 200 oz., 47 oz., and 32 oz., were obtained at Hargraves, and another, weighing 30 oz., at Limestone Creek. The Jubilee nugget, weighing 344 oz., was also discovered in that year at Maitland Bar, in the Mudgee District, and was worth about £1,236.

Although the alluvial deposits discovered in the early days have been practically abandoned and are considered to be worked out, there is ample evidence that the surface of the country has been merely scratched. The search for gold has been prosecuted for more than half a century, and still new fields and fresh deposits are being discovered—in localities, too, supposed to have been thoroughly examined. The gold formation is very widely diffused throughout the State, as may be gathered from the fact that the fields of Albert, Delegate, and Ballina are between 600 and 700 miles distant from each other; and it has been estimated that the extent of country covered by formations in association with which gold always occurs, exceeds 70,000 square miles, whilst it has also been found in strata where its presence was never suspected. A considerable portion of this area has never been touched by the pick of the miner.

Gold is also found in quartz-veins, occurring in older and metamorphic rocks, such as argillaceous slates, chloritic and talcose schists, as well as granite, diorite, serpentine, and porphyry. Vein gold is associated more commonly with iron pyrites, though found with copper, lead, zinc, and silver ores, and also in asbestos. But the extraction of gold from quartz-veins requires the erection of extensive machinery and gold-saving appliances, involving an outlay of capital such as the ordinary miner seldom possesses. Quartz-mining is generally carried on by companies.

Gold has been found in conglomerates in the Coal Measures at Tallawang, and in Carboniferous strata. The Rev. W. B. Clarke detected it in the Hawkesbury sandstone formation, on the north side of Sydney Harbour, and he also mentions that it is distributed through the sand at the mouth of the Richmond River. Along the southern part of the coast of the State, it has been found near the shore, in the sand washed by the waves of the Pacific Ocean; whilst at Bermagui, and in the district extending between Moruya and Eden, important discoveries have also been made. It would be impossible to name every part of the province in which gold is found, as the precious metal appears throughout the greater portion of the territory, and there is ample evidence that there exist deposits which will offer to the prospector or the miner a profitable field of employment for many years to come.

Below will be found the quantity and value of the gold produced during each year, since 1851. The New South Wales gold which was received at the Sydney Mint for coinage in 1905 amounted to 259,279 oz., of the gross value of £890,327, the average price being £3 8s. 8d. per oz. The quantity exported during the year without passing through the Mint was 69,468 oz., valued at £274,686:—

Year.	Quantity.	Value.	Year.	Quantity.	Value.
	oz.	£		oz.	£
1851	144,120	468,336	1880	119,322	444,253
1852	818,751	2,660,946	1881	151,512	573,582
1853	548,052	1,781,172	1882	140,469	526,522
1854	237,910	773,209	1883	123,811	458,530
1855	171,367	654,594	1884	107,403	396,059
1856	184,600	689,174	1885	103,736	378,665
1857	175,949	674,477	1886	101,416	366,294
1858	286,798	1,104,175	1887	110,288	394,579
1859	329,363	1,259,127	1888	87,541	317,241
1860	384,053	1,465,373	1889	119,949	434,784
1861	465,685	1,806,171	1890	127,760	460,285
1862	640,622	2,467,780	1891	153,583	559,231
1863	466,111	1,796,170	1892	158,502	575,299
1864	340,267	1,304,926	1893	179,288	651,286
1865	320,316	1,231,243	1894	324,787	1,156,717
1866	290,014	1,116,404	1895	360,165	1,315,929
1867	271,886	1,053,578	1896	296,072	1,073,360
1868	255,662	994,665	1897	296,416	1,104,315
1869	251,491	974,149	1898	328,840	1,201,743
1870	240,858	931,016	1899	459,800	1,623,320
1871	323,609	1,250,485	1900	309,884	1,070,920
1872	425,288	1,644,177	1901	213,689	737,164
1873	362,104	1,396,375	1902	190,316	684,970
1874	271,166	1,041,614	1903	295,778	1,080,029
1875	230,882	877,694	1904	324,996	1,146,109
1876	167,411	613,190	1905	328,747	1,165,013
1877	124,118	471,448	1906	302,556	1,078,866
1878	119,710	430,200			
1879	109,649	407,219	Total	14,774,438	54,314,152

It will be seen that the value of the gold won amounts to over £54,000,000, and although the annual yield is now considerably less than that of either silver and coal, it must be remembered that gold still holds the premier position as regards the total value of production exceeding that of silver and coal by almost £12,000,000 and £4,000,000 respectively.

A reference to the years 1901 and 1902 will show to what extent gold-mining is dependent on a good rainfall. During 1900 the industry gave employment to 17,958 persons, but in the two succeeding years the effects of the drought caused about 6,000 miners to seek more profitable avenues of employment. With regard to the alluvial deposits, many of them have been worked again and again by the ordinary miner, and sluicing operations are now necessary to secure profitable returns from these areas. As it is beyond the means of the miners engaged in this class of work to erect the necessary dams for the conservation of water, a good rainfall is absolutely essential to enable them to gain a livelihood. Moreover, crushing operations in connection with quartz-mining could not be continued during these years owing to the scarcity of water, and in consequence a great many of the mines were idle for periods ranging from six to nine months, whilst in others, work of a developmental character only could be proceeded with. The general rains which fell towards the close of 1902 were responsible for the increased yield in 1903, and it is satisfactory to note that the output during this year was more than maintained in 1904 and 1905. During the latter year 328,747 oz., valued at £1,165,013, were won, the production being the highest since 1899.

It would appear from the foregoing table that there was a considerable shrinkage in the output during 1906, as compared with that of the previous year. The figures, however, do not accurately reflect the present position of the industry, as gold to the value of about £160,000 was also purchased from the mines within this State, but as it was not lodged at the Mint it could not be included in the official returns for 1906. The gold industry during this year, therefore, shows no actual retrogression, and with the explanation given, the results bear favourable comparison with those of the years immediately preceding.

The introduction of the systems of dredging and sluicing has awakened considerable activity in certain districts where gold is being saved from the beds of rivers and creeks, and also from wet lands which the ordinary alluvial miner experienced considerable difficulty in working. The initial cost of these undertakings is heavy, but, on the other hand, it has been proved that the large quantity of material that can be treated at a small cost, and the saving in labour, more than compensate for it. With the present improved appliances it is possible to treat profitably alluvial drifts containing only 1 or 2 grains to the ton, while a large percentage of gold, and particularly of fine gold, is obtained by operating over alluvial drifts previously worked in a crude way by the alluvial miner.

In 1900, large areas were taken up for dredging for gold and tin, and in spite of the fact that many of the dredges were only working for short periods in the year, results were very satisfactory. The following table demonstrates the progress made since the inauguration of dredging in this State :—

Year.	Area under Lease at 31st Dec.	Gold.		Stream-tin.	
		Quantity.	Value.	Quantity.	Value.
	acres.	oz.	£	tons.	£
1900	6,943	8,882	33,660	......	......
1901	8,702	23,585	89,628	......	......
1902	11,719	25,473	97,891	110	8,300
1903	9,015	27,237	104,303	244	20,100
1904	9,855	32,345	123,656	319	26,180
1905	13,571	35,388	136,090	532	50,904
1906	15,595	36,649	141,101	1,032	120,661
Total..............		189,559	726,329	2,237	226,145

It will be seen that this system of mining has made steady progress during each year of the period, the increase in the number of dredges in operation, coupled with a better understanding of local conditions, contributing in no small measure to this satisfactory result. The area leased for dredging at the 31st December, 1906, was 15,595 acres, as compared with 6,943 acres in 1900, and during the same period the number of dredges in operation increased from 22 to 68, the value of the latter being set down at £315,537. Araluen is the principal centre of gold-dredging operations, and here, during the past seven years, gold to the value of £346,873 has been recovered. The other districts which have contributed in a smaller degree to the total output, are Adelong, Stuart Town, Sofala, Wellington, Tumbarumba, and Nerrigundah. The returns from 22 "bucket" dredges show that 5,992,980 cubic yards of material were treated, the gold won amounting to 27,643 oz., valued at £107,311, or an average of 2·21 grains, worth 4·3d. for every yard. From returns of 7 "pump" dredges, it was found that 1,026,550 cubic yards of material were operated on, and yielded 8,345 oz. of gold, valued at £31,315, or an average of 3·9 grains, worth 7·32d. per cubic yard treated. Information as to cost of working is not given, but it appears that pump dredging or hydraulic sluicing is more expensive than bucket dredging. While it is possible for two men to work a bucket dredge, eight are required for pumping or sluicing. Under certain conditions, however, the pump dredge is more effective than the bucket dredge. Where the bed rock or bottom is hard and uneven, the bucket dredge fails to recover the gold lodged in crevices, while in deposits exceeding 50 feet in depth the hydraulic sluice is also found more effective.

The number of men employed in alluvial and in quartz mining during the last ten years, with the production from each branch of the industry, is set down below. The particulars of production are based on information obtained in the various localities, but owing to the non-receipt of detailed returns in some instances, and to the difficulty in obtaining accurate data respecting all the gold won, the quantity of the metal, as returned by the wardens and mining registrars, does not agree with the total amount actually recorded. The quantities of quartz and alluvial, although only approximate, are considered, however, sufficiently accurate for all practical purposes:—

Year.	Number of Miners.		Production.	
	Alluvial.	Quartz.	Alluvial.	Quartz.
	No.	No.	oz.	oz.
1897	9,030	12,256	73,658	222,758
1898	8,303	11,616	65,889	262,951
1899	8,030	11,318	84,767	375.033
1900	8,387	9.571	64,125	245,759
1901	5,409	6,655	57,293	156,396
1902	5,434	5.176	55,349	134,967
1903	5,906	5,341	69,413	226,365
1904	5,253	5,395	79,040	245,956
1905	5,091	5,218	80,512	248.235
1906	4,255	4,561	78,690	223,866

The above figures give unmistakable evidence that, since 1899, gold-mining has lost the ground gained in the years immediately preceding, and show that it has not received the attention from capitalists and miners which might reasonably be expected. Owing to the high prices ruling for many of the other metals there has been less prospecting for gold than formerly, because it can be easily understood that such a general increase as has taken place in the value of tin, copper, lead, silver, zinc, antimony, etc., must mean a corresponding depreciation in the purchasing power, and consequently the relative value, of gold. The table also serves to accentuate what has already been written relative to the effect that drought conditions exercise upon the industry. The miners employed during 1906 numbered less than half the total ten years ago. All the men employed in quartz-mining are Europeans, but on alluvial fields 307 Chinese found occupation in 1906.

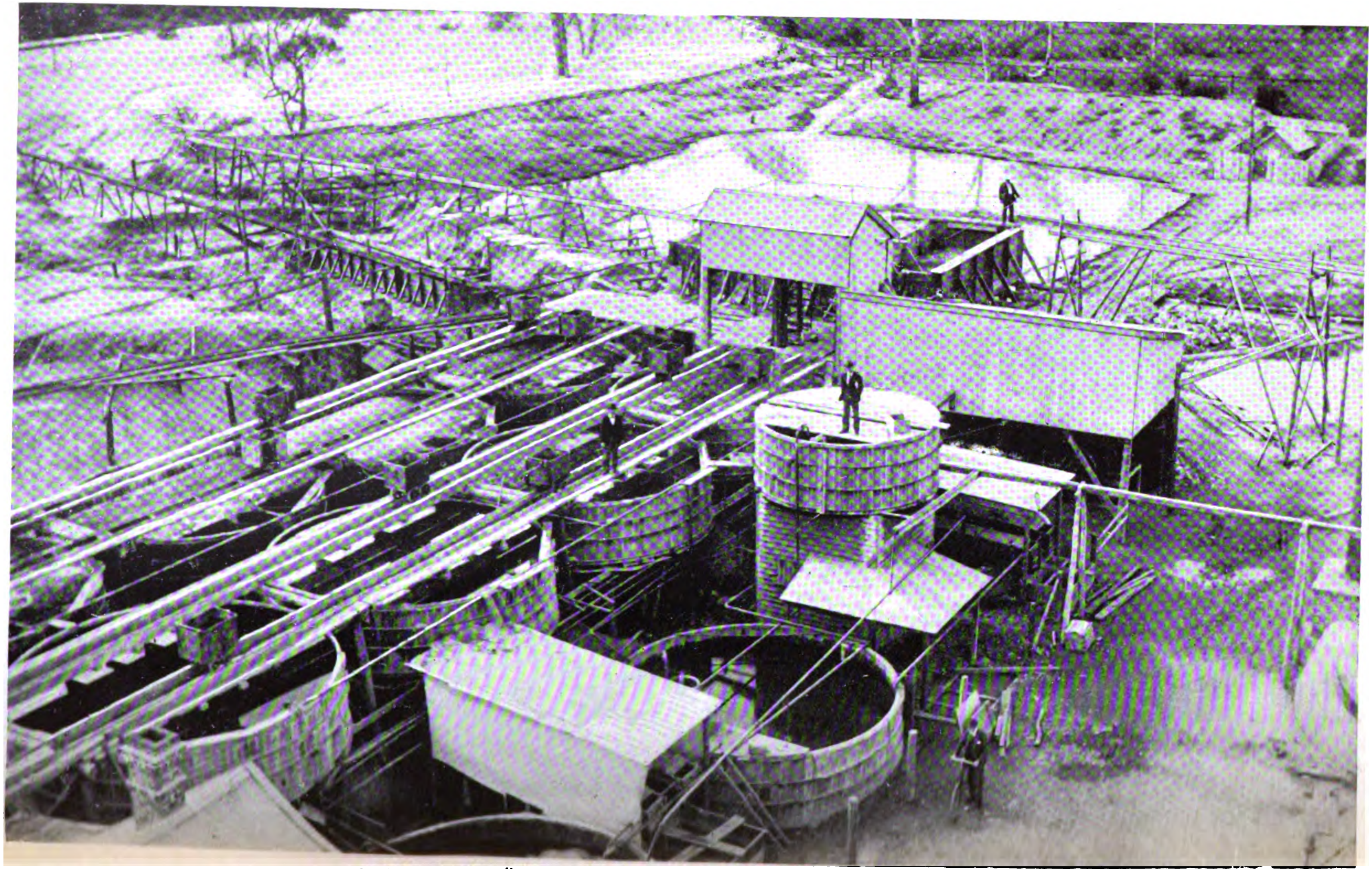
The principal seats of alluvial gold-mining are the Bathurst and Mudgee districts; the country watered by the various feeders of the Upper Lachlan; the Braidwood, and Tumut and Adelong districts; and in the north of the State, the New England district.

The principal quartz veins worked in New South Wales during 1906 are situated near Adelong, Armidale, Bathurst, Cobar, Forbes, Hillgrove, Orange, Pambula, Parkes, Peak Hill, Wellington, and Wyalong. The districts which produced the largest quantities of gold during 1906 were:—Cobar and Mount Drysdale (where the precious metal is largely associated with copper), 68,685 oz.; Wyalong and Wyalong West, 22,936 oz.; Araluen (chiefly dredging), 14,864 oz.; Hillgrove (including Metz), 14,643 oz.; Wellington (Mitchell's Creek), 13,188 oz.; Adelong and Stuart Town (chiefly dredging), 9,297 oz. and 9,262 oz. respectively; Peak Hill, 6,862 oz.; Forbes, 6,416 oz.; Orange (chiefly Lucknow), 5,752 oz.; Murrumburrah, 5,208 oz.; Sofala, 4,253 oz.; and Parkes, 4,158 oz.

In addition to the Mount Drysdale gold-field, in the Cobar district, discovered in 1893, the most important find of recent years was made at Wyalong, in the Lachlan district, where the largest amount of gold won in 1897, 1898, and 1899 was obtained.

For the period 1897-9 the production of Wyalong was the highest from any one field; but the yearly output since 1900 has been exceeded by that of the Cobar and Mount Drysdale field. During the past seven years mine owners have been treating large quantities of low-grade ores, which had been accumulating since the opening of the field; and to enable them to do this profitably, the services of a number of employees were dispensed with, the men employed at the end of 1906 being only 441, as compared with 557 in 1904, and 1,600 in 1899. While the batteries were occupied treating the large quantities of sand, slimes, and concentrates, developmental work was proceeded with in several of the more important mines, and the permanency of the reefs has been conclusively proved in each instance, good gold-bearing sulphide ore being met with at various depths. The opening of the railway from Temora to Wyalong, in October, 1903, had a beneficial effect on the output of the mines during 1904, as the increased production shows. It was found that the treatment of the rich sulphide ores by chlorination was not altogether satisfactory, considering the expense and the quantity of gold recovered. In consequence, large quantities of ore have been despatched to the smelting works on the seaboard for treatment, this being rendered possible by the low railway freight, and charges of the smelting companies. The output from this district during each of the years 1905 and 1906 fell short of expectations, the diminished yield being wholly attributable to the fact that during the last few years at the chief mine little more than developmental work was engaged in.

The Cobar and Mount Drysdale district now holds the premier position as a gold-field, the yield exceeding that of Wyalong for the first time during 1900 by 12,251 oz. The gold won at Cobar is, however, not so fine as that obtained at Wyalong, and only averages £3 10s. per oz., as compared with £3 18s. at the latter place. Much of the success of this field during the last seven years was due to the operations of the Cobar Gold Mines Company (Limited) and the Mount Boppy gold-mine, at Canbelego, and the results obtained at this mine during the last few years



CYANIDE WORKS, "MYALL UNITED" GOLD MINE, McPHAIL (SINCE EXTENDED).

place it in the first rank as regards production. The annual gold yield for this district since 1900 is shown below :—

Year.	Quantity.	Value.
	oz.	£
1900	44,676	157,108
1901	42,299	145,146
1902	26,956	90,209
1903	79,860	266,355
1904	69,140	262,213
1905	70,109	230,386
1906	68,685	224,052

The low yield in 1902 was due to the cessation of work at most of the mines for varying periods on account of the prevailing drought, and the decreases exhibited in 1904 and subsequent years, when compared with 1903, were caused by the restricted operations of the Cobar gold-mines, where, owing to the copper zone being reached, the hands employed have been considerably reduced, pending the adoption of another method for economically treating the gold-copper ore now met with. Prospecting was continued with much energy throughout the year.

The gold found in New South Wales is never absolutely pure, always containing traces of other metals, such as copper, iron, and bismuth, and often a fair percentage of silver. To the presence of silver its light yellow colour is due. New South Wales gold is generally lighter in colour than Victorian gold, but is of a deeper yellow than that found in the fields of Southern Queensland. Its specific gravity averages about 17·5.

The average weight of the metal obtained by each miner in 1906 was 34·32 oz., as compared with 31·89 oz. in the previous year. The values of these quantities work out at £122 7s. 6d. and £113 0s. 2d. respectively for each miner engaged, and these figures compare very favourably with the averages obtained during the past ten years, when the quantity of gold won per miner was 21·45 oz., valued at £76 11s. 11d. It must not be supposed, however, that these figures represent the total earnings of the men engaged in gold-mining. Many of the miners follow other pursuits during a portion of the year; besides this, there were several new fields which so far had yielded very small returns, and a number of men were engaged in prospecting.

The number of fatal accidents in gold-mines during 1906 was only 4, as against 10 in the previous year. Three men lost their lives in auriferous quartz-mining, and 1 in alluvial workings. Fourteen serious accidents occurred in quartz-mines, 1 in alluvial mining, and 2 in connection with dredging.

From the date of the first discovery of payable gold, in 1851, to the end of the year 1906, the quantity of gold produced in the Commonwealth and New Zealand represents a total value of £544,370,000, extracted in the short space of fifty-six years. The share of each State and of New Zealand in the production of this wealth is given below :—

State.	Value.	Proportion raised in each State.
	£	per cent.
New South Wales	54,314,152	10·0
Victoria	276,424,968	50·8
Queensland	64,132,930	11·8
South Australia	2,842,310	0·5
Western Australia	70,864,198	13·0
Tasmania	6,296,205	1·1
Commonwealth	474,874,763	87·2
New Zealand	69,495,502	12·8
Australasia	544,370,265	100·0

By far the largest proportion of the total was produced by Victoria, the return from that State amounting to more than one-half of the whole. Western Australia is the next largest producer, New Zealand coming third, Queensland fourth, and New South Wales fifth. For the ten years ended 1906, the world's production of gold is estimated as follows :—

Year.	Value.	Year.	Value.
	£		£
1897	48,088,000	1902	60,196,000
1898	58,137,000	1903	67,708,000
1899	63,057,000	1904	71,739,000
1900	51,578,000	1905	78,771,000
1901	52,738,000	1906	83,432,000

During this period, the Commonwealth produced about 22·35 per cent., and New South Wales alone 1·85 per cent. of the total.

SILVER.

In the "Mineral Resources of New South Wales," Mr. E. F. Pittman, the Government Geologist, states that, so far as is known, Strzelecki was the first to discover the presence of silver in New South Wales. This was as early as 1839. The Rev. W. B. Clarke, in his work "The Southern Gold-fields,'' published in 1860, also refers to the fact that silver had been found in the local alluvial drifts since 1852, but up to the year 1882 the quantity raised in New South Wales was very small. In that and following years, however, extensive discoveries of the metal, associated principally with lead and copper ores, were made in various parts of the State, notably at Boorook, in the New England district, and, later on, at Sunny Corner, near Bathurst, and at Silverton, Broken Hill, and other places on the Barrier Range.

In more recent years, the deposit at Walla Walla, near Rye Park, has been worked with varying success, and the returns from the Yerranderie mines, in the Burragorang district, have exhibited very satisfactory increases during the past five or six years. During 1905, promising developments occurred in the vicinity of Coppabella, but the results so far have fallen short of expectations. A silver-lode has also been discovered at the C.S.A. mine, at Cobar, and it is of such exceptional promise that it is exceedingly difficult to say what future developments may bring forth. The greatest achievement, however, in connection with silver-mining in this State is the profitable extraction of zinc from the immense heaps of tailings which have accumulated since the opening of the Broken Hill mines a little more than twenty years ago. The formation of a company to recover the zinc contents of large quantities of tailings, and the steps taken by other mining companies, notably the Broken Hill Proprietary Company, have added greatly to the vast wealth of minerals extracted from this field, and, in addition, point to this State becoming in the near future one of the principal producers of spelter.

The argentiferous lead ores of the Barrier Ranges and Broken Hill districts of New South Wales have, more than any other, attracted attention. This rich silver-field, which was discovered in 1883 by Charles Rasp, a boundary rider on Mount Gipps run, extends over 2,500 square miles of country, and has developed into one of the principal mining centres of the world. It is situated beyond the river Darling, and on the confines of South Australia. In the Barrier Range district, the lodes occur in Silurian metamorphic micaceous schists and banded gneisses, intruded by granite, porphyry, and diorite, and traversed by numerous quartz reefs, some of which are gold-bearing. The Broken Hill lode is the largest as yet discovered. It varies in width from 10 feet to 200 feet, and may be traced for several miles, the country having been taken up all along the line of the lode, and subdivided into numerous leases, held by mining companies and syndicates.

The Broken Hill Proprietary Company hold the premier position. They have at Port Pirie, in South Australia, a complete smelting plant on the latest and most approved principles; and now that the problem of recovering the zinc contents of the ores has been satisfactorily solved, the company has made extensive additions to the plant already erected, and it is contemplated that the manufacture of spelter will shortly be an accomplished fact. From the commencement of mining operations in 1885 to the end of November, 1906, the company treated 8,593,460 tons of silver and silver-lead ores, producing 137,334,965 fine oz. of silver and 825,949 tons of lead, valued in the London market at £30,620,000. They have paid dividends and bonuses to the amount of £8,576,000, besides the nominal value of shares from the several "Blocks." The sum spent in the erection and construction of plant, from the opening of the property, has been about £1,409,800. The mine wages and salary-sheet for the last twelve months reached £596,307, including £161,659 paid to contractors. The balance of £434,648 was made up of—mine wages, £116,081; smelters' wages, £106,920; sintering, concentration, and refinery wages, £137,362; electric light, machine-shop wages, and assay expenses, £30,822; and sulphuric acid and zinc separation, £43,463. The net profit for the year was £546,617. Besides the mines at Broken Hill, there are workings at Silverton and Thackaringa, in the same district. The total value of minerals exported from the Barrier district during 1906 was £2,187,926, distributed as follows:—Silver-lead ore, concentrates, and slimes, 308,386 tons, £1,987,542; copper ore, 681 tons, £6,077; zinc concentrates, 85,848 tons, £182,793; tin ore, 15 cwt., £36; and gold contained in silver-lead ores, 2,870 oz., £11,478.

As a natural consequence of the success of the Broken Hill mines, numbers of miners were attracted to the district, and the population, which in 1883 consisted of only a few station hands, had risen at the date of the 1901 census to a total of 28,887 souls, of whom 6,320 men were employed in and about the mines. The population of the municipality is now set down at 28,250, and 8,457 persons were permanently employed on the mines at the end of 1906. As evidencing the increased activity now being displayed, it might be mentioned that at no time in the history of this field were more men employed than during 1906, when the average was 1,050 in excess of that for the previous year. The aggregate output of the mines, including the Proprietary, to the end of 1906, was valued at £37,812,000; and the value of the machinery in the Barrier district at the end of the year was £891,934. This is much less than the values previously set down, the reduction being chiefly due to the removal of machinery to Port Pirie, where the smelting operations of the Proprietary Company are now wholly carried out. For this reason, too, the production is exported chiefly as silver-lead concentrates, but in this respect the output during 1906 has experienced a slight decrease so far as quantities are concerned, owing to fires and creeps in some of the mines. The year's export amounted to 206,953 tons, valued at £1,758,494, as against 252,164 tons, worth £1,571,247, in 1905. Zinc recovery is the all-important question at the present time, and it is satisfactory to record that the output of zinc concentrates during 1906 amounted to 85,848 tons, valued at £182,793, or about two-and-a-quarter times the value of the output for the year 1903. Notwithstanding the fact that, for the reasons referred to above, the quantity sent away from the district during 1906 fell short of that exported in the previous year by 7,995 tons, the total value of the concentrates in 1905 only exceeded the value obtained in 1906 by £56, on account of the enhanced prices ruling during the latter year. Now that the attempts to treat the by-products of the mines have at last been successful, the importance of the zinc industry cannot be over-estimated so far as the future of the district, and, indirectly, the whole of the State, is concerned. At the end of 1904, there were more than 5½ million tons of slimes, tailings, and other by-products awaiting re-treatment, and these are being considerably augmented month by month. It has been estimated, on the basis of average assays, that these immense heaps of by-products contain, roughly speaking, 34,000,000 oz. of silver, 380,000 tons of lead, and 1,022,000 tons of zinc.

The proximity of Silverton and the Barrier district to South Australia could not fail to attract the attention of the business people at Adelaide, who were not slow to realise the advantages which they would obtain by attracting towards their capital the traffic of a region of such immense wealth. The railway system of South Australia was immediately extended to the border, and a tramway was laid down in New South Wales, thus connecting the town of Silverton and the mines of Broken Hill with the railway to Adelaide and Port Pirie, in the latter instance reducing the land carriage by some 70 or 80 miles.

The question of determining the metallic contents of the silver and silver-lead ores mined in this State has always been one of great difficulty owing to the absence of sufficiently reliable data, and also to the fact that only a very small percentage of the ore won is treated within the confines of New South Wales. The figures published by the Broken Hill Proprietary company have, in the past, enabled rough approximations to be made, but the results arrived at have not been considered satisfactory. For the past four years, however, the Department of Mines has been enabled to collect from the various mine managers, smelting companies, and ore buyers in Australia particulars of the metallic contents of all New South Wales ores treated, the results being shown below:—

Contents, &c.	1903.	1904.	1905.	1906.
Silver (fine oz.)	6,489,689	7,751,667	6,804,934	5,575,410
Lead (tons)	92,293	106,038	93,182	79,925
Zinc (tons)	286	299	544	1,008
Value of above £	1,790,929	2,088,784	2,131,317	2,112,977

In addition to the ore treated within the Commonwealth, the results of which are shown above, concentrates are exported to Europe for treatment. The quantity and value of these, together with the estimated gross silver, lead, and zinc contents, based on average assays, are shown hereunder:—

Year.	Concentrates, &c., exported.		Estimated Metallic contents.		
	Quantity.	Amount received.	Silver.	Lead.	Zinc.
	tons.	£	oz.	tons.	tons.
1903	76,824	308,714	1,736,512	29.706	14,625
1904	140,464	642,125	2,945,058	59,507	22,318
1905	270,474	1,181,720	3,480,561	69,044	30,637
1906	165,151	1,876,834	3,111,013	58,683	33,427

In connection with the above figures it should be mentioned that, although the metallic contents are based on average assays, it is impossible to say what proportion of the same was recovered.

From the two previous tables it will be seen that the estimated quantities of silver, lead, and zinc contained in the sulphide ores won during the last four years are as follow:—

Year.	Silver.	Lead.	Zinc.
	fine oz.	tons.	tons.
1903	8,226,201	121,999	14,911
1904	10,696,725	165,545	22,617
1905	10,285,495	162,226	31,181
1906	8,686,423	138,608	34,435
	37,894,844	588,378	103,144

It should, however, be remembered that this State is not entitled to take credit for the full value of the finished product, as large sums are expended outside New South Wales in extracting the silver, lead, and zinc. For this reason, the production of silver and lead is set down at the value declared to the Customs authorities of the quantities exported.

The quantity and value of silver and silver-lead ore exported from New South Wales to the end of 1906 are shown in the following table:—

Year.	Silver.		Silver-sulphides, Silver-lead, and Ore.			Total Value.
	Quantity.	Value.	Quantity.		Value.	
			Ore.	Metal.		
	oz.	£	tons	tons	£	£
Up to 1881	726,779	178,405	192	....	5,025	183,430
1882	38,618	9,024	12	....	360	9,384
1883	77,066	16,488	106	....	1,625	18,113
1884	93,660	19,780	4,668	....	123,174	142,954
1885	794,174	159,187	2,096	191	107,626	266,813
1886	1,015,433	197,544	4,802	....	294,485	492,029
1887	177,308	32,458	12,530	....	541,952	574,410
1888	375,064	66,668	11,739	18,102	1,075,737	1,142,405
1889	416,895	72,001	46,965	34,580	1,899,197	1,971,198
1890	496,553	95,410	89,720	41,320	2,667,144	2,762,554
1891	729,590	134,850	92,384	55,396	3,484,739	3,619,589
1892	350,661	56,884	87,505	45,850	2,420,952	2,477,836
1893	531,972	78,131	155,859	58,401	2,953,589	3,031,720
1894	846,822	94,150	137,813	42,513	2,195,339	2,289,489
1895	550,142	81,858	190,193	29,687	1,560,813	1,642,671
1896	202,789	26,518	267,363	19,573	1,758,933	1,785,451
1897	150,005	16,711	270,913	18,105	1,681,528	1,698,239
1898	533,059	59,278	388,460	10,109	1,644,777	1,704,055
1899	692,036	76,913	424,337	20,290	1,993,744	2,070,657
1900	774,203	90,243	420,910	17,928	2,513,874	2,604,117
1901	448,501	50,484	400,157	16,921	1,803,979	1,854,463
1902	1,067,224	105,360	365,646	15,413	1,334,819	1,440,179
1903	1,099,373	113,755	330,581	18,483	1,387,648	1,501,403
1904	1,121,402	123,256	367,483	29,737	1,942,284	2,065,540
1905	417,520	52,196	413,648	27,799	2,441,856	2,494,052
1906	284,994	36,431	349,720	22,218	2,826,542	2,862,973
Total	14,011,843	2,043,983	4,835,802	542,616	40,661,741	42,705,724

As the bulk of the silver has been exported in the form of silver-lead bullion and ore, it is impossible to ascertain the quantity of pure silver won except for the last four years. The net value of the ores won during these years is set down at £8,923,968, and from the tables already given it will be seen that the estimated gross silver and lead contents amounted to 37,894,844 oz. fine, and 588,378 tons respectively, but owing to the absence of similar data for previous years, and also the great improvements effected during recent years in the method of extraction and treatment of the ores generally, it is impossible to state with any degree of accuracy the metallic contents of the total production of the State. Owing to the steady fall in the price of the metal, which had already set in before the opening up of the Broken Hill mines, and which, after a slight recovery in 1890, has been enormously accentuated by the closing of the Indian mints and the stoppage of purchases by the Government of the United States, the value of the output has greatly diminished. In 1890 the price of silver was still as high as $47\frac{3}{4}$d. per oz. standard; in 1893, when the Indian mints were closed, the price was $35\frac{5}{8}$d., and this fell to 29d. in 1894; while in 1898 the average for the year was only $26\frac{11}{16}$d. per oz., the slight recovery in 1895 and 1896 having been more than lost. An improvement, however, took place in 1899, the average for the year being $27\frac{7}{16}$d. per oz., and this was still further increased during 1900, when the average price obtained was the highest since 1896, viz., $28\frac{1}{4}$d. per oz., ranging from $27\frac{1}{16}$d. early in January to $30\frac{1}{8}$d. in October, the price being well maintained to the close of the year, when the quotation stood at $29\frac{5}{8}$d. per ounce. In 1901, however, there was again a decline in price, the average for the year standing at $27\frac{3}{16}$d. The fall partially paralysed the industry, necessitating the closing down of all but the largest mines. The price of lead also fell disastrously during 1901, the quotations declining steadily from £16 2s. 6d. at the beginning of the year to £10 7s. 6d. for the last week in December.

The fall in the price of lead resulted in the closing down of several of the Barrier mines producing low-grade silver, as these could only be worked at a profit while the price of lead remained at a satisfactory figure. It has been estimated that the loss to the total mineral production of Australasia occasioned by the depreciation in silver and lead amounted to upwards of £800,000.

During 1902 the price fell much below the previous record of $23\frac{3}{4}$d., which was touched in 1897, the lowest quotation being $21\frac{11}{16}$d. in November, and the highest, $26\frac{1}{8}$d. in January, the average for the year being $24\frac{1}{8}$d., the lowest on record. The improvement manifested during the closing months of 1902 was not maintained in the earlier part of the following year, but although the lowest quotation on record $21\frac{11}{16}$d. was again reached, the general tendency during the year was distinctly upwards, and in October as high as $28\frac{1}{2}$d. was quoted. The average for the year worked out at $24\frac{3}{4}$d. Although the silver market during 1904 was very active, the price remained remarkably steady, averaging $26\frac{3}{8}$d. for the year. Owing to the declaration of war between Russia and Japan prices quickly rose to $27\frac{1}{2}$d. in February, but heavy sales caused a decline, and the lowest price of the year was reached in April. In May, purchases by the Indian and Panama Governments caused spot silver to become very scarce, and prices continued to rise till $28\frac{9}{16}$d., the highest price of the year, was reached in December. There were considerable fluctuations in the price of silver during 1905, and quotations ranged from $25\frac{7}{16}$d. to $30\frac{5}{16}$d. The latter figure was quoted several times in November and December, the enhanced price being due to urgent requirements for the Indian Government, when the market was already bare of supplies. During 1906, however, the shipments to India, even after allowing for the increase in value, were double those of the previous year. The closing price for the year was $30\frac{1}{16}$d., but within the first week of

1907 this had risen to $32\frac{1}{16}$d. During 1904 the position of lead underwent a great change for the better, the closing price of £12 18s. 9d., contrasting very favourably with the £11 5s. ruling twelve months earlier. The prices continued to increase during 1905 till the 20th December, when the figures reached £17 2s. 6d., indicative of a return to the rates ruling in the years 1899 and 1900. The average price during 1906 was just on £17 7s. per ton, the closing price of the year being as high as £20 per ton. Similar satisfactory advances are recorded regarding spelter, the average annual prices obtained in 1904 and two subsequent years being £22 13s. 1d., £25 7s. 8d., and £27 1s. 4d. per ton respectively.

The number of miners engaged in silver and silver-lead mines in 1906 was 9,414, and the average value of mineral won, per miner engaged, was £304 2s. 5d. A comparison with the figures of the previous ten years is afforded by the following table:—

Year.	Miners.	Value of Silver and Lead won.			
		Total.	Per Miner.		
	No.	£	£	s.	d.
1896	5,555	1,785,451	321	8	3
1897	6,204	1,698,239	273	14	8
1898	6,396	1,704,055	266	8	6
1899	7,893	2,070,657	262	6	10
1900	8,196	2,604,117	317	14	7
1901	6,298	1,854,463	294	9	1
1902	5,382	1,440,179	267	11	10
1903	6,035	1,501,403	248	15	8
1904	7,071	2,065,540	292	2	3
1905	7,887	2,494,052	316	4	6
1906	9,414	2,862,973	304	2	5

The total number of accidents which occurred in the silver-mines of the State in 1906 was 53, 19 persons losing their lives, while 34 were seriously injured. Cases of slight injury are not now recorded.

Operations at the smelting works at Dapto, near Lake Illawarra, were suspended in March, 1905, and in the meantime the Australian Smelting Corporation (Limited), has acquired the works, which are being transferred to a more convenient site at Port Kembla. The old plant is being considerably improved and increased, and will embody the latest metallurgical practice in the smelting of ores. Operations will be resumed under the new conditions about the middle of 1907, and the Corporation has secured contracts for the smelting or purchase of large quantities of silver-lead concentrates for a period of five years from the end of 1907.

The works of the Sulphide Corporation at Cockle Creek, near Newcastle, were in active operation during the year, and a considerably increased supply of ores was treated.

The work performed by these establishments is of much value to the mining community, as individual miners and small companies are enabled to work profitably deposits which otherwise would require the expenditure of large sums of money.

As illustrating the extent to which these works are availed of by miners and others within the State, it is interesting to note that during 1906 the Sulphide Corporation produced 28,667 fine oz. of gold, 1,290,887 fine oz. of silver, and 19,762 tons of lead. These quantites are exclusive of the metals recovered from imported ores.

The world's production of silver, during the ten years ended 1905, is estimated as follows:—

Year.	Ounces.	Year.	Ounces.
1896	176,707,000	1901	174,851,000
1897	182,081,000	1902	164,560,000
1898	179,252,000	1903	173,222,000
1899	177,837,000	1904	182,262,000
1900	180,093,000	1905	189,830,000

COPPER.

The principal deposits of this mineral are found in the central part of the State, between the Macquarie, Bogan, and Darling Rivers. Deposits have also been found in the New England and Southern districts, as well as at Broken Hill, showing that the mineral is widely distributed. The copper-mining industry is one of considerable importance, and reached its highest point of production in 1906, when the output was valued at £789,527. Up to 1902, the year of highest production was 1883, when copper to the value of £472,982 was recovered; but from this date, however, the industry rapidly declined, in consequence of the heavy fall in the price of the metal; indeed, the very low figure reached deterred many from embarking in operations which showed every promise of success, while some of the mines which had been worked for several years were closed. In 1894, the production was only valued at £63,617. The principal difficulty, common to other branches of the mining industry, lay in the great distance of some of the chief copper-mines from the port of shipment, and the consequently heavy cost of land carriage. The year 1894, however, saw the lowest point of depression in the copper market, the average price for the year being only £40 per ton. Prices steadily increased during the next five years, the advance in the value of the metal being well sustained in 1900. In 1901 and 1902, however, prices greatly declined, quotations for these years averaging £67 and £52 11s. 6d. respectively. The average price for 1904 was £59 7s. 6d., but owing to the demand created by the cessation of hostilities in the East, and the requirements in Europe and America for electrical and other purposes, a further increase was recorded in 1905, when the average price was £69 2s. 6d. per ton. Notwithstanding the substantial increase in the world's production of copper during 1906, which has been estimated at no less than 708,800 tons, it has been confidently asserted that, owing to the ever-increasing demand for electrical power, consumption has outstripped production, and stocks in producers' hands have vanished. It is not to be wondered at that there has been a continuance of high rates throughout 1906 and the first quarter of 1907. The price gradually rose to £86 2s. 6d. in June, 1906, and although it receded slightly to £78 10s. in the middle of July, the upward tendency continued to the end of the year, when £107 2s. 6d. was the ruling price. This was further increased to £109 10s. in March, 1907, and although for some reason there has since been a drop to £100, it is not expected, owing to the unprecedented demand for copper, that the price will fall below this figure, as it would require an enormous increase in production to send the price down to what it was a few years ago. During the last decade copper-mining has shown very satisfactory progress, and the average production is much in advance of any other similar period. During 1904, the output was valued at £406,001, as compared with £462,640 for the previous year, due mainly to the cessation of productive work at one of the principal mines in the Burraga district; but conditions have decidedly improved, and the mine is again in full operation. With copper at such a high figure, it was only to be expected that the mining for this metal would come in for considerable attention. The value of the copper production during 1905, and which stood as a record, was £527,403, but these figures have been largely exceeded by the returns for 1906, when the production amounted to £789,527. This is much in excess of the value of the output for any previous year, and shows the extent to which the industry has benefited by the enhanced price of the metal. During the year the Great Cobar Mine was taken over by a new company, and the arrangements now being given effect to for the augmenting of the output of ores are a happy augury for the future prosperity of Cobar. The other established mines in the Cobar-Nymagee district have furnished substantial outputs, while mention has to be made of the interest occasioned by the discovery of the lode in the Budgery mine. Several promising lodes were located during the year in various parts of the State, and many of the old mines, owing to the sustained high price of copper, have been reopened, and are being remuneratively worked, so that the general outlook is exceptionally bright. The copper-lodes of New South Wales contain ores of a very much higher grade than those of many well-known mines worked at a profit in other parts of the world, and, with a fair price, should return satisfactory results. The net export of copper, which is taken as the production of the State, is shown below from the year 1858:—

Year.	Value.	Year.	Value.
	£		£
1858 to 1876	503,576	1893	73,287
1877	144,441	1894	63,617
1878	209,030	1895	136,969
1879	210,623	1896	197,814
1880	268,700	1897	283,174
1881	267,884	1898	272,686
1882	182,473	1899	395,451
1883	472,982	1900	425,301
1884	362,287	1901	412,292
1885	170,627	1902	307,806
1886	122,985	1903	462,640
1887	115,444	1904	406,001
1888	247,304	1905	527,403
1889	122,444	1906	789,527
1890	84,107		
1891	119,195	Total ...£	8,472,629
1892	114,559		

The more important mines are those of Cobar, where the Great Cobar mine, which recommenced work early in 1894, raised in the following year 37,845 tons of ore, yielding 1,703 tons of smelted copper; in 1896, 66,431 tons of ore, yielding 2,650 tons of smelted copper, valued at £107,200; and in 1897, 64,820 tons of ore, yielding 2,462 tons of smelted copper, valued at £108,306. Similar information for subsequent years is not available, but in the division of which the Great Cobar is the principal mine, 3,514 tons of refined copper, valued at £178,900, were obtained during 1898, and 3,794 tons, valued at £265,580, in 1899. During 1900, the total quantity of copper-ore raised was 111,783 tons, which yielded 3,538 tons of refined copper, valued at £251,460, 8,462 oz. of gold, valued at £33,848, and 60,112 oz. of silver, valued at £6,762; the total value being £292,070.

The output of metals from this district during the last six years is shown hereunder :—

Metals.	1901.	1902.	1903.	1904.	1905.	1906.
	£	£	£	£	£	£
Gold	145,146	90,209	266,355	262,213	231,418	224,052
Silver	5,114	3,688	5,089	5,033	9,366	10,034
Copper	192,989	130,802	221,242	236,510	444,858	516,320
Lead	....	....	....	....	3,000	17,416
Totals	343,249	224,699	492,686	503,756	688,642	767,822

In other portions of the Cobar district considerable activity has been displayed. At Nymagee very satisfactory progress was made, and copper to the value of £194,895 was produced during the last two years. Increased yields have also been contributed by the mines at Shuttleton and Bee Mountain. Recent developments favour the opinion that the auriferous copper ores at the Cobar gold-mines and other mines will at no distant date be worked in conjunction with one or other of the richer copper mines of the district.

The Mount Hope mine, which had been shut down for four years, re-opened early in the year, and recovered copper to the extent of £14,672. The Lloyd copper-mine, in the Burraga district, treated some 60,000 tons of material, and obtained 1,223 tons of copper, valued at £100,000. The production during 1905 was valued at £82,076.

The total number of miners engaged in copper-mining in 1906 was 3,047, as against 2,171 in 1905, 1,850 in 1904, 1,816 in 1903, and 1,699 in 1902. It may be mentioned that the number of men finding employment in 1896 was only 810; this figure rapidly increased to 3,334 in 1900, but fell away to 2,964 in 1901, and 1,699 in 1902. There were three fatal accidents recorded in copper-mining in 1906, and thirteen miners were seriously injured.

TIN.

Lode tin occurs principally in the granite country and stream tin under the basaltic formation in the extreme north of the State—at Tenterfield, Emmaville, Tingha, and in other districts of New England. The metal has also been discovered in the Barrier district, at Poolamacca and Euriowie; near Bombala, in the Monaro district; at Gundle, near Kempsey; at Jingellic, on the Upper Murray; at Dora Dora, on the Upper Murray; and in the valley of the Lachlan; but in none of these districts has it been worked to any extent. Although the first discovery was made by the Rev. W. B. Clarke as far back as 1853, the opening of tin-fields did not take place until the year 1872. The value of production since that date has been as follows :—

Year.	Value.	Year.	Value.	Year.	Value.
	£		£		£
1872 to 1876	1,295,606	1887	311,889	1898	45,638
1877	248,906	1888	309,510	1899	90,482
1878	214,613	1889	207,670	1900	142,724
1879	256,282	1890	179,057	1901	76,544
1880	354,252	1891	133,963	1902	59,593
1881	568,795	1892	152,994	1903	150,208
1882	541,413	1893	126,114	1904	188,277
1883	448,887	1894	85,264	1905	226,110
1884	281,186	1895	87,937	1906	255,744
1885	308,760	1896	68,546		
1886	277,545	1897	49,900	Total...£	7,744,509

It will be seen that tin has contributed, in a very considerable degree, to the total production of the mineral wealth of the State, and in point of value its aggregate yield stands in the fifth place—next to gold, coal, silver, and copper. From the opening of the fields the production increased rapidly down to 1881, when in value it almost equalled the output of gold for the year, and was but slightly behind coal. In 1882, the production was valued at £541,413, being only £27,000 less than in 1881; but after that year, owing to protracted dry seasons, which in many cases prevented mining operations, combined with the comparatively low price of the metal, the value of the output fell considerably, and in 1898 only represented the small sum of £45,638. From 1899 onwards, the high prices obtained for tin had a very stimulating effect upon the industry, and but for the years 1901 and 1902, when production was greatly interfered with by the severe drought, which retarded washing operations, a steady increase has been maintained, till the value of the production during 1906—£255,744—exceeded that of any year since 1888. Prior to 1905 the year of highest average price was 1900, when the production reached £142,724, showing an increase of £52,242 over that of the previous year; but this was due entirely to the enhanced price of the metal, as the actual quantity of stream tin and ore was considerably below the production of former years. In 1896, the average was only £59 10s., the lowest during the last quarter of a century; but during the next four years this rapidly increased to £133 11s. 6d., and although it again fell to £118 12s. 6d., the following year the price rose again, and stood at £120 14s. 6d. in 1902, £127 in 1903, £126 10s. in 1904, and £142 3s. 6d. in 1905. The metal, however, made a further advance in price during 1906, and quickly rose to the record price of £214 in May of that year, since which time the quotations have ranged from £166 to £198 10s., the price of the metal on 18th March, 1907, being £188.15s., as compared with £134 5s. two years earlier.

The output of the metal during each of the years subsequent to 1889 shows a considerable falling-off when compared with that recorded during the years prior to that date, but the decrease is due, to a large extent, to the exhaustion of the shallow deposits of stream tin. The deep deposits and the tin-lodes, however, have as yet scarcely been touched, nearly all the metal hitherto produced having been taken from alluvial deposits. After careful surveys, Professor David has stated his belief that numbers of deep channels or leads, covered over by basalt, are still lying undisturbed; and the future of the industry in the State, with the improvement in the price of the metal, may be hopefully regarded. The increased production during recent years is due to the activity that has characterised tin-mining on the various fields throughout the State owing to the satisfactory prices obtained. A feature of the industry is the success achieved by the operations of the dredges. The principal leads worked during 1906 were at Tingha; at Elsmere, in the Inverell district; at the Mann River, near Glen Innes; at Vegetable Creek, near Emmaville; at Deepwater; and at Wilson's Downfall. The only lodes worked are at the Ottery Mine, and at Torrington and Silent Grove, in the Deepwater division. The Ottery Mine, at which practically the only mining for lode-tin of any extent has been done in the State, is situated at Tent Hill, in the Emmaville district. Although the mine has been worked continuously for more than twenty years with satisfactory results, it was shut down early in 1906, as it is generally considered that the lode has now cut out. Dredging for tin-ore has now become a firmly-established industry, and during 1906 twenty-seven pump dredges, operating on the stanniferous gravels in the Tingha and Inverell divisions, recovered 943 tons of stream tin, valued at £110,582. Two plants operating on Wylie Creek, near Wilson's Downfall, obtained 58 tons of stream tin as the result of the year's work; the value is set down at £6,345. There were also several smaller plants operating in the Glen Innes, Bendemeer, and Germanton divisions, and, in addition, a quantity of stream tin was saved by several of the gold dredges. In all, tin-ore to the extent of 1,032 tons, valued at £120,661, was recovered during 1906, an increase in value of £69,757 being shown as compared with the output from this source in the previous year. Within the thirty-five years that have elapsed since the opening of the tin-fields, the value of the net export, which is taken as the production, has been £7,744,509.

In the alluvial tin-fields of Tingha and Emmaville, the number of Chinese engaged in this industry has in some years greatly exceeded that of the Europeans. In 1906, however, the Chinese at Emmaville numbered only 180, whilst the Europeans numbered 750; at Tingha, 1,580 Europeans and 300 Chinese were engaged in tin-mining. The total number of miners employed in tin-mining in the State was 3,795, viz., 3,157 Europeans and 638 Chinese, of whom 634 were employed in the Northern districts. In 1905, 2,212 Europeans and 672 Chinese were engaged in the industry.

Three fatalities occurred during 1906 in tin-mining, one of which was in connection with dredging; there was only one serious accident recorded.

IRON.

Iron is widely diffused throughout the State, and occurs principally in the form of magnetite, brown hematite or goethite, limonite, and bog-iron. Deposits of chrome iron are also found. Magnetite is the richest of all the iron ores, and, when pure, contains a little over 72 per cent. of available metallic iron, though it is not often found reaching this very high percentage. These ores are widely distributed throughout New South Wales. The results of a number of analyses made from deposits at Brown's Creek, in the county of Bathurst, where veins were opened out a few years ago, show that the samples of ore yielded from 48·83 to 61·30 per cent. of metallic iron. At Wallerawang, a variety of garnet, containing a large percentage of metal, occurs in conjunction with the ore in the veins, which is described as "extremely well adapted for reduction in the blast furnace." Brown hematite or goethite occurs in very extensive deposits in the Blue Mountain and Macquarie Ranges, the principal centres so far explored being situated at Mittagong, Picton, Berrima, Cadia (near Orange), Lithgow Valley, Wallerawang, in the Rylstone and Mudgee districts, and in the vicinity of Port Stephens. The result of a number of analyses of this kind of ore denotes that it is very rich in metallic iron, containing a proportion of 42·69 to 64·48 per cent., and in the majority of cases over 45 per cent. of metal. A sample of hematite from the Maitland district contained 60·83 per cent. of metallic iron. A sample of brown hematite from Mount Pleasant, near Wollongong, analysed during 1891, gave 54·28 per cent. of iron. The value of these deposits is enhanced by their almost invariable occurrence in proximity to limestone and coal beds. It is fortunate, also, that the main lines of railway pass through the regions where the deposits are most easily worked.

Limonite—a variety of brown hematite—occurs principally at Lithgow, Eskbank, and Bowenfels, in the Blue Mountains; in several parts of the Hunter River coal-field; and at Bulli, in the Illawarra district. This ore is usually found very rich in metal, and contains an average of over 50 per cent. of iron, while the English clay bands, which are mostly carbonates, only contain about 30 per cent. of metallic substance. It occurs in lenticular layers of no great extent, in the Coal Measures. Bog-iron ore, which is impure limonite, is found principally at Mittagong; and assays of this ore gave an average percentage of metal of more than 45 per cent.

The following table, taken from a report furnished during 1905 by Mr. E. F. Pittman, Government Geologist, gives the description and estimated quantity of iron-ore available in the various districts of New South Wales where the deposits occur:—

District.	Description of Ore.	Estimated minimum quantity of Ore.
		tons.
Bredalbane	Brown ore and hematite	700,000
Cadia	Specular hematite, magnetite, and carbonate ore.	39,000,000
Carcoar	Hematite and brown ore	3,000,000
Chalybeate Spring — Deposits of Southern District.	Brown ore	1,510,000
Cowra (Broula)	Magnetic ore	100,000
Goulburn	Brown ore	1,022,000
Gulgong	Magnetic ore	120,000
Mandurama and Woodstock	Brown ore	609,000
Marulan	Brown ore and hematite	40,000
Mudgee	Brown ore with manganese	150,000
Newbridge, Blayney, and Orange	Brown ore and magnetic ore	150,000
Queanbeyan (Paddy's Point)	Magnetic ore	1,000,000
Rylstone and Cudgegong	Brown ore	443,000
Wallerawang and Piper's Flat	Brown ore	200,000
Williams and Karuah Rivers	Titaniferous magnetic ore	1,973,000
Wingello	Aluminous ore	3,000,000
	Total	53,017,000

It will be seen from the above that the Cadia ironstone beds—14 miles from Orange—have proved the most extensive yet examined. The ore comprises two classes, oxidised and unoxidised, the former of which consists of hematite and magnetite, and contains from 57 to 61 per cent. of metallic iron. A large proportion of the ore is of excellent quality and suitable for the manufacture of steel by the ordinary Bessemer and other acid processes, and compares favourably with some of the best American ores.

The deposits at Carcoar include brown ore, hematite, and magnetite. It is estimated that at least 3 million tons of ore are in sight, and it is probable that the deposit is capable of yielding 10,000,000 tons, or even a larger quantity. The ore contains from 52·67 per cent. of metallic iron, and it is stated that it could be smelted at Lithgow at a cost not exceeding £2 8s. per ton, inclusive of carriage. At Lithgow there is abundance of cheap coal, and good limestone can also be obtained in large quantities in the locality.

None of the other States, with the exception of Tasmania, possesses deposits of iron-ore approaching in extent or richness those of New South Wales. It is therefore probable that at some future time this State will become the great seat of the iron industry of Australia. The chief obstacle in the way of development, even where the coal necessary for smelting the ore can easily be obtained, has been the relation of cost to market value. Pig-iron and its manufactures have been imported more cheaply than it was possible to produce them locally, and therefore, despite the efforts made from time to time to stimulate the industry, little has been accomplished yet. Recently, however, in spite of the increased production consequent on the advance in prices in England, Europe, and America, there has been such an expansion in consumption that the opportunity seems favourable for working the extensive deposits of iron-ore in New South Wales and the neighbouring States. Iron and coal constitute the basis of all large industries and manufactures and where, as in New South Wales, the iron-ore is to be found in close proximity to the coal necessary for smelting, the locally produced article should be cheaper than the imported. It has been stated that iron can be produced at a cost ranging from £2 10s. to £3 10s. per ton; it is reasonable therefore to hope for a development of the industry in the near future.

For many years the establishment of iron smelting works in New South Wales has been spoken of, and in 1890 public attention in England was drawn to the possibility of manufacturing iron here, and a mining expert was sent out from that country to inspect the iron, lime, and coal deposits, and to report upon the probable cost of establishing the industry in the State, but the visit was without result, although the report is believed to have been favourable. The iron ores at Carcoar were not inspected by the expert, and it is stated that these deposits, through their extent, quality, and proximity to coal and limestone are the most important in New South Wales. In 1897 it seemed as if the project for establishing works for the manufacture of iron would take practical shape, and negotiations for the promotion of a company in England were well under way when they were interrupted by the death of the prime mover. Subsequently a proposal was made by the Blythe River Iron Company of Tasmania for the erection of large iron and steel smelting works at Sydney, provided that the State Government agreed to take 100,000 tons of steel rails, during a period of four years. The proposal was not carried out for various reasons, but mainly on account of the price to be paid being subject to market fluctuations in Great Britain and America. The Government subsequently received three private offers for the manufacture of steel rails. One was from a combined local and English firm, the second from the Blythe River Company, and the third from an American syndicate. Nothing, however, was done in the matter. During 1905, the question of the local manufacture of iron and steel was so far advanced that the Government entered into an agreement with the firm of W. Sandford, Ltd., for the manufacture, supply, and delivery of all pig-iron, rolled steel, and iron required during a period of seven years. This necessitated the establishment of blast furnaces, and the erection of machinery and plant for the conversion of iron-ore into pig-iron and rolled steel and iron, and capable of supplying all the materials included in the contract. Though the contracting firm is at liberty to use 10 per cent. of imported pig-iron in the manufacture of the various materials, it has been stated that only New South Wales iron-ore, coal, limestone, and other fluxes will be utilised. The preparatory work necessary before smelting operations could be commenced was at once proceeded with, and so satisfactory has been the progress in this direction that the blast furnace was formally opened by the Premier, the Hon. J. H. Carruthers, on the 13th May, 1907, in the presence of a representative gathering of prominent citizens, who witnessed the various processes in connection with the manufacture of pig-iron. The output of the furnace is estimated at about 700 tons per week, and to accomplish this it is calculated that 1,400 tons of ore, 350 tons of limestone, and 750 tons of coke will be required.

Coincident with the date on which the contract for the manufacture of pig-iron began—21st October, 1905—the Clyde Engineering Company's contract for the construction of 60 goods and passenger engines commenced. In view of the national significance which attaches to the success of both these branches of a great industry, so far as the people of New South Wales and the other States are concerned, it is gratifying to be able to record that the outpouring of pig-iron from the blast furnace at Lithgow was accomplished but a few days previous to the completion of the first locomotive.

The first iron works in New South Wales were established in 1852 at Fitzroy, near Mittagong, where there were several deposits of excellent brown ore, or limonite, which owe their origin to chalybeate springs. Coal seams underlie the deposits, and limestone is obtainable within 40 miles. Smelting operations were carried on intermittently, and some pig-iron was produced, but in 1855 the works were closed down as the undertaking was unprofitable. They were reopened in 1864, and during this and the two following years considerable progress was made. A quantity of iron was produced, and many castings were made. Amongst the latter were gas-pipes, bridge cylinders, and girders, which were made from iron smelted from the ore, and taken direct to the mould, without first making it into pig-iron. In 1875 the works were taken over by the Bessemer Steel and Haematite Iron and Coal Company, but after producing 3,242 tons of pig-iron, operations were discontinued. Some samples of ore, coal, and limestone obtained in this district, with pig-iron and castings manufactured therefrom, were exhibited at the late Mining Exhibition in London, and obtained a first award. Works for the manufacture of iron from ore were established at Eskbank, near Lithgow, where red siliceous ore, averaging 22 per cent., and brown hematite, yielding 50 per cent. of metallic iron, were successfully treated. Abundance of coal and limestone are found in the neighbourhood. Smelting operations were commenced in October, 1875, and about 22,000 tons of pig-iron were produced. This establishment, however, for some time abandoned the manufacture of pig-iron, for which it was originally built. Prior to the erection of the blast furnace already referred to in this chapter, the work carried on consisted of the re-rolling of old rails, and the manufacture of iron bars, rods, and nails, and of ordinary castings. The quantity so manufactured to the end of 1906 was 128,056 tons, valued at £1,272,501.

Large quantities of iron ore have been raised from the deposits situated in the Marulan, Goulburn, Bredalbane, Mittagong, and Carcoar districts, and despatched to the smelting works at Dapto and Cockle Creek, where it has been used as flux, the gold contents of the ore helping to defray the extra cost of railway carriage. During 1903, 22,120 tons of ironstone, valued at £15,834, were raised and sent away from Coombing Park, Carcoar, Marulan, Picton, and Peak Hill, as compared with 13,555 tons, valued at £10,690 in 1902. The quantity raised in 1904, however, was only 8,661 tons, valued at £6,628, and the output was further diminished in 1905, when it was only 6,801 tons, valued at £4,525. This decreased output is partly due to the closing down of the smelting works at Dapto. Only 935 tons, valued at £723, were mined during 1906 for use at the Cockle Creek Smelting Works. The establishment of ironworks at Eskbank should be responsible for a greatly increased output in the near future. Parcels of iron oxide continue to be sent from the Fitzroy and other ironstone deposits in the Mittagong and Port Macquarie districts to the various gas-works of the Australian States and New Zealand, where it is used in purifying gas.

ANTIMONY.

Deposits of antimony occur in the State in various places, chiefly in the Armidale, Bathurst, and Rylstone districts; and at Bowraville, on the North Coast. The principal centre of this industry is at Hillgrove, near Armidale, where the Eleanora Mine, one of the richest in the State, is situated. The output during 1906 was mainly confined to this district, where it is found that the metal can be profitably extracted owing to its association with gold. The results of a number of analyses of antimony ore, made by the authorities of the Geological Museum, show from 16·5 to 79·45 per cent. of metal; but, notwithstanding these encouraging assays, the price has never until recently been sufficiently high to stimulate production to any extent. During 1906 the value locally of 50 per cent. ore rose quickly from £10 10s. per ton to £25 in May, and for the remainder of the year the price fluctuated between that amount and £30 per ton. The satisfactory price of the metal was the cause of numerous long-abandoned claims being reoccupied, and mining operations were carried on with great activity throughout the year on the Hillgrove field, and also at Bowraville, where several leases have been taken up. Prospectors were successful in obtaining small quantities of ore in the Bingara, Barraba, and Nundle divisions, and at Lionsville, in the Copmanhurst district. A considerable quantity of ore was raised some years ago at the Corangula mines, in the Macleay district, but these are at present closed down. Lodes have also been opened and partly worked near Nambucca, Drake, Gulgong, and Razorback. The value of antimony raised during 1906 was £52,645, as compared with £5,221 in 1905. The total quantity raised up to the end of 1906 is set down at 14,364 tons, valued at £253,279.

MANGANESE.

Deposits of manganese ore have been discovered in various parts of New South Wales. Pyrolusite, in the form of black oxide and manganese dioxide, occurs principally in the Bathurst districts and at Bendemeer. Wide veins have also been found in the Glen Innes district, near the Newton-Boyd road. Some of the specimens analysed have yielded a very high percentage of metal; but the demand for manganese in the State is very trifling, and until a foreign market is found, or local manufactories requiring the metal spring up, the rich deposits of this ore will remain comparatively untouched. The ore is found extensively in conjunction with iron in coal and limestone country, and often contains a small percentage of cobalt.

The value of manganese raised to the end of 1906 is set down at £1,655, the last year of production being 1903, when only 72¾ tons, valued at £254, were raised.

BISMUTH.

Bismuth is found associated with molybdenum and gold, in quartz-veins, in the neighbourhood of Glen Innes, where the quantity raised has been chiefly obtained. The principal mines are situated at Kingsgate, where the mineral occurs in a granite formation, associated with molybdenum, mispickel, and tin. The total quantity of this metal exported during 1906 was 25 tons, valued at £5,700. The bulk of the bismuth was contributed by the International Mines (Ltd.), at Jingera, in the Pambula district. Rich argentiferous ores have been obtained, the lodes consisting of soft granular felspar matrix, impregnated with blotches of bismuth, molybdenum, and chloride of silver. The largest mass of native bismuth yet discovered in the State weighed nearly 30 lb., and was obtained in the Kingsgate mine. The value of this metal exported up to the end of 1906 was £114,614.

MOLYBDENUM.

Molybdenite, which is the principal ore of molybdenum, occurs most plentifully in pipe-veins at Kingsgate, near Glen Innes, and in the Jingera Mineral Proprietary mines at Whipstick, near Pambula; in both these localities it is associated with ores of bismuth. Molybdenum is used chiefly in the preparation of special steels, its influence being similar to that of tungsten, but it gives greater toughness, while molybdenum steel is more readily worked when hot, and stands hardening better than tungsten steel. The output during 1906 was confined to the Kingsgate district, the quantity exported during the year being valued at £4,798, as compared with £2,507 in 1905.

PLATINUM.

Platinum and the allied compound metal iridosmine have been found in New South Wales, but so far in inconsiderable quantities, the latter occurring commonly with gold or tin in alluvial drifts. Beach mining in the Ballina district, where platinum was associated with gold in considerable quantities, is now a thing of the past. The metal has also been discovered at Fifield, in the Parkes district, and in lodes near Broken Hill and Orange. Mining operations were confined in 1906 to the Fifield gold-field, where the metal is found associated with the gold in washdirt. The total yield of platinum for the year was 205 oz., as compared with 398 oz. in 1905. Operations were practically abandoned towards the close of 1906, as miners secured more remunerative employment elsewhere. The Fifield platinum occurs in coarse, shotty grains, and is much purer than that obtained from the northern beach-sands. The quantity of platinum produced during 1906 was valued at £623, and to the end of that year, £17,540.

CHROMIUM.

Chromium is found in the northern portion of New South Wales, in the Clarence and Tamworth districts, and also near Gundagai. It is usually associated with serpentine. The chrome mining industry is of very recent date, although an attempt was made in 1882 to open up deposits at Bowling Alley Point, in the Peel River district; and in 1891 and 1895 in the Clarence River district. The first successful mining operations were carried out near Coolac, in the Gundagai district, 2,000 tons of ore being despatched in 1894 and 1895; and although numerous discoveries of chromite followed, the Gundagai-Tumut district has alone yielded profitable results. The exports of chrome ore in 1894, 1895, and 1896 amounted to 3,034 tons, 4,299 tons, and 3,852 tons, respectively; but the low price obtainable has prejudicially affected the industry, and although in 1897 the export still amounted to 3,379 tons, valued at £10,269, a considerable portion of this was raised in previous years. The production in 1898 decreased to 2,111 tons, valued at £6,301. During 1899, however, 5,243 tons, valued at £17,416, were produced. This quantity is the highest recorded as the annual output. In 1900 the production fell to 3,285 tons, valued at £11,827, the decrease being due to the exhaustion of the smaller deposits, and in 1901 the quantity raised—2,483 tons—was valued at only £7,774. The production during 1904, owing to the poor quality of the ore raised, only amounted to 397 tons, valued at £1,268, as compared with 1,951 tons, valued at £7,342, in 1903, and 500 tons, valued at £1,740, in 1902. During the past two years only 67 tons, valued at £77, have been disposed of for use in the lining of furnaces. The principal mines are at Mount Lightning, in the Mooney Mooney Ranges, about 18 miles from Gundagai. The value of chrome iron ore won to the end of 1906 was £101,003.

OTHER METALS.

Mercury, in the form of cinnabar, has been discovered on the Cudgegong River, near Rylstone, and it also occurs at Bingara, Solferino, Yulgilbar, and Cooma. In the latter place the assays of ore yielded 22 per cent. of mercury. Very large and rich deposits have been found on Noggriga Creek, near Yulgilbar. During 1899, a deposit of cinnabar, yielding a high percentage of quicksilver, was found near Lionsville, in the parish of Ewengar, county Drake. Prospecting operations were continued in 1900, and proved the occurrence of extensive deposits, but of a lower grade. The ore was sent to Sydney for treatment pending the erection of the necessary plant. As an encouragement in the search for quicksilver ores, the Department of Mines has offered to pay a reward of £500 to the first person or company producing 50,000 lb. of quicksilver from ores raised in New South Wales. During 1903, 40 tons of ore were treated, yielding 1,010 lb. of quicksilver, valued at £126; but since that year there has been no further production.

Deposits of cobaltiferous minerals have been found at Bungonia, Carcoar, and Port Macquarie; but the market for the metal is small, and no attempt has yet been made to produce it on a large scale. The only deposits worked during recent years are at Port Macquarie, where the ore occurs in nests or pockets in serpentine and the overlaying clays resulting from its decomposition; but as the ore is of irregular occurrence, and does not permit of profitable working, operations were discontinued during 1904. An average sample assayed cobalt oxide 7·48, and nickel oxide 1·36, and a picked sample showed cobalt oxide 7·03, and nickel oxide 2·39 per cent. The output of cobalt during 1904—the last year of production—was valued at £60, as against £1,570 for the preceding year. The value of the total production to the end of 1904 was £7,955.

Tellurium has been discovered at Bingara and other parts of the northern districts, as well as at Tarana, on the Western line, though at present only in such small quantities as would not repay the cost of working. It has also been found at Captain's Flat, in association with bismuth.

Selenium has been discovered at Mount Hope, also in association with bismuth.

Wolfram and scheelite, generally associated with other minerals, such as tinstone (cassiterite), bismuth, and molybdenite, occur in many parts of New South Wales. The deposits, as a rule, have been found too patchy for profitable working, and as the market is limited, very little has been done in the way of production. The steady demand that has existed during the last few years for tungsten ores has, however, stimulated the search for payable deposits, especially in the Peel and Uralla and New England districts. Practically all the scheelite was produced in the Hillgrove district during 1906, the ore being of good quality and carrying a large percentage of tungstic acid. During the year 109 tons, valued at £7,647, were exported. Wolfram ore was mainly obtained during the year in the vicinity of Deepwater and Emmaville, where, owing to the increased demand for tungsten minerals and the high price ruling, prospecting was vigorously prosecuted. The quantity exported during 1906 was 132 tons, valued at £9,057.

Zinc is usually found associated with silver, lead, and copper, and during the last few years attention has been directed to the production of a high-grade zinc concentrate from the sulphide ores. Experiments are still in progress with magnetic separators of various types and other processes to determine the best method of treating the immense bodies of zinc tailings at Broken Hill, carrying lead and large quantities of silver.

The results so far indicate a successful issue to the difficulty hitherto experienced. The value of the zinc produced during 1901 was £4,057, as against £44,187 in 1900, £49,207 in 1899, and £20,914 during 1898. In 1902, 1,261 tons, valued at £10,625, were produced; but the output greatly increased during the succeeding years, 20,754 tons, valued at £86,587, being produced in 1903, and 57,603 tons, valued at £117,978, in 1904, 103,532 tons, valued at £221,155 in 1905, and 103,666 tons, valued at £292,806 in 1906. The total production to the end of 1906 was valued at £890,274. In connection with the zinc treatment at Broken Hill, the plant for the manufacture of sulphuric acid on the Proprietary Mine has been considerably increased, and large works for a similar purpose have also been erected by the Zinc Corporation. The quantity of sulphuric acid manufactured by the Broken Hill Proprietary Company (Ltd.) during 1906 was 2,262 tons.

Deposits of pigments are found near Mudgee and Dubbo, and also in the Orange district, where a fair quantity of the raw material, consisting principally of purple oxide and yellow ochre, has been produced.

NON-METALLIC MINERALS—COAL.

Among the varied mineral resources of New South Wales, coal is perhaps the most important, for not only is the quality of the mineral superior to that found in the other States, but the carboniferous formations are of much greater extent than in any other part of Australia. The area over which the mineral is distributed in this State has been computed at from 24,000 to 28,000 square miles; but the limit within which the Coal Measures are considered productive is set down at 16,550 square miles, and the Government Geologist has estimated the quantity of coal underlying this area, down to a depth of 4,000 feet, at 115,347 million tons. This estimate allows for one-third loss in working; but no account has been taken of the Coal Measures of the Clarence basin, or of the area to the west of a line stretching from Dubbo to Texas. The coal in these districts is probably suitable for local requirements; but its quality is not sufficiently good for purposes of export, and it would be expensive to work by reason of the numerous bands of shale which occur in the seams.

At present the coal-mining industry is confined to those centres which, from their close proximity to ports of shipment or the railway lines, afford ready means for the disposal of the commodity when raised.

Coal was first discovered in New South Wales in the year 1797, near Mount Keira, in the Illawarra district, by a man named Clark, supercargo of the "Sydney Cove," while he was endeavouring to reach Sydney by way of the coast after the wreck of that vessel in Bass Straits. Later in the same year Lieutenant Shortland discovered the river Hunter, with the coal-beds situated near its mouth, and mining operations in this district, begun in a humble way in 1826, have now reached enormous dimensions.

The deposits which have been found in the Blue Mountains, near the line of railway which runs along their crest, at Katoomba, Lithgow, Wallerawang, and elsewhere, supply a portion of the requirements of Sydney and other industrial centres in its neighbourhood, as well as part of the western district of the State. Coal is also mined at Berrima and other places in that district, whence a large quantity of the coal consumed in the southern districts of the State is obtained. Some years ago the diamond-drill was used at Cremorne Point, near Mosman's Bay, for the purpose of ascertaining whether coal existed beneath the metropolis. A depth of 3,095 feet was reached, the deepest bore yet put down in Australia. Coal was met with, but the work was discontinued, as there was every reason to believe, from the position of two doleritic dykes met with, that a volcanic disturbance, such as is often found in the southern coal-fields, had occurred at that particular spot. It was considered to have been proved that the Illawarra Coal Measures extended under Sydney, and it was resolved to put down another bore about half a mile distant from the previous one, and midway between the two dykes. The new bore-hole was the largest ever attempted in Australia, the boring-bit being 5½ inches in diameter and capable of bringing up a 4⅛-inch core. A commencement was made with this work at the end of 1891, and, after carrying the bore down to a depth of 2,929 feet, a very valuable discovery of good steam coal was made. The seam is 10 feet 3 inches in thickness, 9 feet 2 inches of it being workable. A company to work the mine was floated in London with a nominal capital of £300,000, and sinking operations were commenced in June, 1897, on the shores of Long Cove, Balmain. On the 21st November, 1901, coal was reached at a depth of 2,880 feet, and driving operations have since been continued without interruption. A coal seam 6 feet 6½ inches thick has been found on the Moorbank estate, near Liverpool, at a depth of 2,583 feet. Coal has also been found in the Clarence series, though it has not yet been worked commercially. Three seams have been proved at Coraki, on the Richmond River.

In 1826, the Australian Agricultural Society obtained a grant of 1,000,000 acres of land, together with the sole right, conferred by charter, of working the coal-seams which were known to exist in the Newcastle district. Several mines were opened up, and profitably worked for a number of years; but it was not until the expiration, in 1847, of the monopoly enjoyed by the company, that the coal-mining industry showed signs of extensive development. During the year named the output of coal only reached the total of 40,732 tons, of the value of £13,750. Six years afterwards the production had been doubled, and the output of this mineral has rapidly increased year by year, until coal-mining is now one of the staple industries of the State, the production for the year 1906 amounting to 7,626,362 tons, valued at £2,337,227. This quantity is the largest output recorded, exceeding that of the previous year by nearly a million tons; but as the average price secured was little more than 6s. 1½d. per ton, the value of the production is only £17,567 in excess of that raised in 1903—the previous record year—when prices were more than 20 per cent. higher. The total production to the end of the year 1906 was 130,020,225 tons, valued at £50,356,743. If the experience of the world at large can be taken as any criterion, then, of the States of the Commonwealth, New South Wales should easily assume first rank as a manufacturing State. Generally speaking, those countries which are the largest coal producers are also the largest manufacturers. The United Kingdom, the United States, and Germany, between them produced over 80 per cent. of the world's supply of coal, and these countries easily outstripped all others as exporters of domestic manufactures. Newcastle, the centre of the local coal trade, is singularly well-fitted by situation to become the port of supply for all the countries of the southern seas. Every week coal-laden vessels leave its wharves, not only for the Australian States, but for New Zealand, China, India, the Pacific Slope of North and South America, Mauritius, the Cape of Good Hope, and other lands. Ample provision has been made by the Government for shipping coal, and over 2 miles of wharves, furnished with cranes and shoots capable of loading over 25,000 tons per day, line its shores. The markets of the State are likewise supplied with excellent coal from the seams worked in the Illawarra district, and the product of the southern collieries is also exported in large quantities.

The number of coal-mines under inspection in New South Wales at the end of the year 1906 was 106, and these gave employment to 14,929 persons, of whom 11,588 were employed under ground and 3,341 above ground. The average quantity of coal extracted per miner was 658 tons, as against an average of 600 tons for the previous year, and 541 tons for 1904.

Below will be found the quantity of coal raised in New South Wales and the number of coal-miners employed, during each of the last ten years. Calculated on the total value of the coal produced during the decade, the average quantity of 592 tons extracted yearly by each person employed underground represents a value of £189 18s. 4d., and for the total number of persons employed, 468 tons, valued at £150 3s. In 1906 the average value of production was £201 13s. 10d. for each person employed underground, and £156 11s. 1d. for each person employed in any capacity about the mines:—

Year.	Persons employed in and about mines.	Persons employed under-ground.	Quantity of Coal raised.		
			Total.	Per person employed in and about mines.	Per person employed under-ground.
	No.	No.	tons.	tons.	tons.
1897	9,626	7,831	4,383,591	455	560
1898	10,258	8,192	4,706,251	459	574
1899	10,339	8,217	4,597,028	445	559
1900	11,333	9,000	5,507,497	486	612
1901	12,191	9,644	5,968,426	489	619
1902	12,815	10,050	5,942,011	464	591
1903	13,917	10,910	6,354,846	457	582
1904	14,034	11,122	6,019,809	429	541
1905	14,019	11,054	6,632,138	473	600
1906	14,929	11,588	7,626,362	511	658
Average for 10 years	12,346	9,761	5,773,796	468	592

The industry has long since recovered from the effects of the strikes in 1887 and 1890, which not only caused a temporary suspension of trade, and deprived the State of the benefit of hewing and handling some 600,000 tons of coal, but induced buyers to seek other markets for the supply of their requirements. Among other things, this promoted the development of the coal-mines in Japan, where, owing to the cheapness of labour, coal can be produced, though possibly of inferior quality, at a price which makes it a formidable competitor with the Australian product. A satisfactory feature of the coal trade is the very large quantity taken for home requirements, a result indicative of greater industrial activity. The increase is undoubtedly due to the large quantities now required for smelting and other purposes.

Northern District.—In the Northern or Hunter River District the number of collieries under official inspection in 1906 was 73, employing a complement of 11,005 persons, 8,478 of whom were miners, wheelers, etc., employed underground. The quantity of coal raised amounted to 5,336,188 tons, valued at £1,718,178, or over 70 per cent. of the whole production of New South Wales. This shows an increase of 690,446 tons on the figures of the previous year, the amount raised being the highest in any one year.

The following table shows the growth of the coal industry within the last ten years in the Hunter District. Both the number of men employed and the quantity of coal raised have, with few exceptions, steadily increased during the period:—

Year.	Persons employed in and about mines.	Persons employed under-ground.	Quantity of Coal raised.		
			Total.	Per person employed in and about mines.	Per person employed under-ground.
	No.	No.	tons.	tons.	tons.
1897	7,229	5,925	3,176,869	439	536
1898	7,767	6,247	3,355,600	432	537
1899	7,815	6,249	3,259,708	417	522
1900	8,555	6,817	3,926,584	459	576
1901	9,157	7,258	3,999,252	437	551
1902	9,730	7,588	3,900,297	401	514
1903	10,461	8,161	4,410,565	422	540
1904	10,450	8,217	4,042,739	387	492
1905	10,505	8,265	4,645,742	442	562
1906	11,005	8,478	5,336,188	485	629

Southern and South-western District.—In this district there were in 1906 fifteen collieries under official inspection, giving employment to 3,249 persons, of whom 2,540 were at work underground. These numbers exhibit an increase of 199 persons employed in and about the mines, and of 143 underground workers, as compared with those so engaged in 1905. There was also an increase of 226,717 tons in the production, the total quantity raised during the year being 1,783,395 tons, valued at £494,871. Owing to the demand for Southern coal for steam purposes, the trade of this district has greatly improved during recent years. The increase would doubtless have been more pronounced but for the difficulty experienced in loading. To meet the claims of this district, the Government is making a harbour at Port Kembla, a few miles south of Wollongong. The work authorised comprises the construction of a breakwater 2,800 feet long, and the necessary shipping appliances, at a cost not to exceed £220,000. When these are completed it is anticipated that shipping operations will be greatly facilitated. Up to the 31st January, 1907, 1,586 feet of the breakwater had been completed, and the two jetties from which coal is shipped are already experiencing a fair measure of protection from the effects of the south-easterly and easterly gales that constantly sweep up the coast.

The history of coal production in the Southern district for the last ten years may be gathered from the following table:—

Year.	Persons employed in and about mines.	Persons employed under-ground.	Quantity of Coal raised.		
			Total.	Per person employed in and about mines.	Per person employed under-ground.
	No.	No.	tons.	tons.	tons.
1897	1,984	1,562	918,862	463	588
1898	2,067	1,596	1,068,367	517	669
1899	2,121	1,636	1,119,503	528	684
1900	2,324	1,802	1,265,055	544	702
1901	2,499	1,946	1,544,454	618	794
1902	2,545	1,988	1,588,473	624	799
1903	2,887	2,255	1,476,005	511	654
1904	3,044	2,450	1,558,383	512	636
1905	3,050	2,397	1,556,678	510	649
1906	3,249	2,540	1,783,395	549	702

Western District.—In the Western District, in 1906, there were 18 collieries under official inspection, giving employment to 675 persons, of whom 570 were at work underground. From the subsequent table, it will be seen that the output has largely expanded during the decade; the increase being due to more regular work, and the absence of labour troubles, which retarded operations in the earlier years. The average quantity of coal raised per miner is much greater in the Western collieries than elsewhere in the State. This is due to a variety of causes, but chiefly to the greater thickness of the seams and the more friable character of the coal, and to the circumstance that the coal-beds are almost horizontal, and generally at small depths; in some cases the coal is worked by means of adits or tunnels instead of shafts, so that the facilities for winning the mineral are much greater in these mines than in those of Newcastle. But though the output is greater per miner than in the other coal-mining districts, the price for hewing is lower, so that the earnings of the individual miner do not differ greatly wherever the mine is situated.

The following table shows the growth of coal production in the Western district during the last ten years. Up to 1891 the progress was regular, and in keeping with the advance of settlement in the portion of the State extending from the Blue Mountains to the Darling, in which the Western collieries have a monopoly of the coal trade; but from 346,804 tons in 1891, the output decreased to 190,864 tons in 1895. A considerable improvement, however, has been manifested since 1896. Situated, as these mines are, in close proximity to the principal iron-fields of New South Wales, their future prospects will be greatly improved now that the manufacture of iron from the ore will soon be an accomplished fact in this part of the State:—

Year.	Persons employed in and about mines.	Persons employed underground.	Quantity of Coal raised		
			Total.	Per person employed in and about mines.	Per person employed underground.
	No.	No.	tons.	tons.	tons.
1897	413	344	287,860	697	837
1898	424	349	282,284	666	809
1899	403	332	217,817	540	656
1900	454	381	315,858	696	829
1901	535	440	424,720	812	965
1902	540	474	453,241	839	956
1903	569	494	468,276	823	948
1904	540	455	418,687	775	920
1905	464	392	429,718	926	1,096
1906	675	570	506,779	751	889

The following table shows the average price of coal per ton in the various districts for the last ten years; the average for New South Wales makes allowance for the quantity raised in each district:—

District.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Northern	5 11	5 8	6 2	6 4	8 4	8 4	8 1	7 2	6 4	6 5
Southern	5 1	4 9	4 11	5 5	5 3	5 9	5 8	5 7	5 0	4 11
Western............	4 1	4 3	4 2	4 11	4 10	5 1	5 0	5 2	5 5	5 7
New South Wales	5 7	5 5	5 9	6 1	7 4	7 5	7 4	6 8	6 0½	6 1½

ACCIDENTS IN MINES.

There were 21 persons killed, and 72 seriously injured, during 1906, the number of cases terminating fatally being 3 less than in the previous year. The non-fatal cases were less numerous than in any year since 1898. For the decennial period ended 1905, the average annual loss of life in the British coal-mines was 1·31 per thousand, or at the rate of 227,434 tons of mineral raised for every fatal accident. It should be explained that these figures relate not only to the coal-mines, but also to those working under the "Coal-Mines Regulation Act." By comparing the coal-mines only with all the mines regulated by the Act mentioned for the years for which separate information is available, it is found that the results are practically identical, so that it may be reasonably inferred that the figures for the decade give an accurate idea of the conditions under which coal-mining is carried on in the United Kingdom. In the New South Wales collieries, for the ten years ended 1906, the rate was 2·12 fatal accidents per thousand miners employed, and 217;686 tons of coal were raised for every life lost. The number of accidents in the coal and shale mines of the State, with the proportion of miners to each fatal and non-fatal case, is given herewith, as well as the quantity of mineral raised to each life lost and person injured:—

Year.	Accidents.		Number of miners employed to each person.		Number of tons of mineral raised to each person.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
1897	16	63	624	158	276,105	70,122
1898	25	*113	421	93	189,438	41,911
1899	10	*154	1,052	68	463,375	30,089
1900	24	*193	479	60	230,432	28,655
1901	17	*207	730	60	354,306	29,098
1902	105	*154	125	85	57,189	38,993
1903	13	*121	1,086	116	491,509	52,807
1904	12	*121	1,179	117	504,807	50,063
1905	24	*115	589	123	277,932	58,003
1906	21	*125	724	118	364,705	61,270

* Includes 44, 100, 92, 90, 96, 50, 56, 47, and 53, minor accidents respectively, not previously reported.

The abnormally high figures for 1902 were due to the Mt. Kembla explosion, which caused the deaths of 95 persons, and injuries more or less serious to 14 others, so that for some years the decennial death-rate in connection with the coal-mines of the State will be above the general average. Notwithstanding this fact, however, the experience of coal-mining in New South Wales compares favourably with that of other coal-producing countries.

The average annual number of fatalities in the coal and shale mines of various countries for the last available ten years will be seen from the following table:—

Country.	Average Annual Number of—		Mortality per 1,000 Employed.
	Persons Employed.	Lives Lost.	
United Kingdom	778,337	1,020	1·31
United States	359,355	941	2·62
Prussia	378,963	870	4·86
France	151,591	176	1·16
Austria	112,647	187	1·66
Belgium	124,238	147	1·19
British Columbia	2,933	9	3·00
Nova Scotia	5,529	21	3·78
New South Wales	11,990	27	2·25

The New South Wales Miners' Accident Relief Act, which came into force on the 1st January, 1901, applies to all mines in or about which fifteen or more persons are employed. A sum of 4½d. per week is deducted from the wages of each employee and paid by the manager of the mine to the treasurer of a committee for the mine. The committee for a mine consists of (1) an Inspector of Mines appointed by the Minister, (2) three persons appointed by the employees, and (3) two persons appointed by the owner or manager, if he thinks fit. The committee receives and considers all applications for relief in cases of accident, and votes such allowances as appear warranted under the provisions of the Act. The Fund is administered by a Board consisting of six members, one of whom is the chairman, and the others representative of (1) owners of coal and shale mines, (2) owners of other mines, (3) persons employed in or about coal and shale mines, (4) persons employed in or about other mines, and (5) the Department of Mines. Payments into the Fund comprise (1) the balances of deductions from wages unexpended by the committees in payment of allowances, (2) a quarterly contribution by the owner or owners of each mine equal to 50 per cent. of the aggregate amount deducted from the wages at such mine, and (3) a subsidy from the Consolidated Revenue Fund equal to the amount contributed by owners of mines. The Board makes advances to committees in cases where the sums deducted from wages are inadequate to meet allowances payable.

The benefits provided by the Act are:—

(I) In cases of fatal accident—(1) Funeral allowance, £12; (2) a weekly allowance of 10s. to the widow or other adult dependent upon the deceased for support; and (3) a weekly allowance of 3s. in respect of each child of the deceased or of each child of an adult dependent, payable until such child attains the age of 14 years.

(II) In cases of disablement—(1) A weekly allowance of 15s. until able to resume work; and (2) where disablement is permanent, a weekly allowance of 3s. in respect of each child under the age of 14 years.

For the six years during which the Act has been in operation, the average annual number of employees contributing has been 22,088, the amount contributed being £129,213. During the same period the mine owners have paid £60,254, and Government subsidy to the extent of £58,983 has been received; the sum of £96,083 has been disbursed in allowances. Accumulated funds, amounting to £161,000, have been invested in New South Wales Funded Stock.

At the end of 1906, the "permanent" beneficiaries numbered 742, 593 of whom were drawing allowances in respect of fatal accidents, and 149 as the result of permanent disablement; 213 persons were drawing an allowance of 10s. weekly, and 65 permanently disabled workmen were each receiving 15s. weekly. The balance was made up of 464 children, to whom a weekly allowance of 3s. was made, 380 of them being beneficiaries in respect of fatal accidents.

PRODUCTION OF COAL.

The following table shows the quantity and value of coal raised in New South Wales from the earliest record to the close of 1905, the total production being 130,020,225 tons, valued at £50,356,743:—

Period.	Quantity.	Average per ton.		Value.
	tons.	s.	d.	£
Prior to 1830	50,780	10	0	25,394
1830 to 1839	111,069	8	9	50,523
1840 ,, 1849	349,961	9	2	155,083
1850 ,, 1859	1,481,761	12	11	1,004,924
1860 ,, 1869	6,174,132	10	2	2,961,910
1870 ,, 1879	12,530,044	10	7	6,838,889
1880	1,466,180	8	5	615,337
1881	1,769,597	6	10	603,248
1882	2,109,282	9	0	948,965
*1883	2,521,457	9	6	1,201,942
1884	2,749,109	9	6	1,303,077
1885	2,878,863	9	4	1,340,213
1886	2,830,175	9	2	1,303,164
1887	2,922,497	9	3	1,346,440
1888	3,203,444	9	1	1,455,198
1889	3,655,632	8	11	1,632,849
1890	3,060,876	8	4	1,279,089
1891	4,037,929	8	8	1,742,796
1892	3,780,968	7	9	1.462,368
1893	3,278,328	7	2	1,171,722
1894	3,672,076	6	4	1,155,573
1895	3,738,589	5	10	1,095,327
1896	3,909,517	5	9	1,125,281
1897	4,383,591	5	7	1,230,041
1898	4,706,251	5	5	1,271,833
1899	4,597,028	5	9	1,325,799
1900	5,507,497	6	1	1,668,911
1901	5,968,426	7	4	2,178,929
1902	5,942,011	7	5	2,206,596
1903	6,354,846	7	4	2,319,660
1904	6,019,809	6	7	1,994,952
1905	6,632,138	6	1	2,003,461
1906	7,626,362	6	2	2,337,227
Total	130,020,225	7	9	50,356,743

From 1883 to 1898, there was a general decline in the price obtained per ton, but in this respect coal has not differed greatly from other products. In the earlier years, however, the fluctuations in prices to a large extent arose from uncertainty in the markets. This uncertainty no longer exists, for the local markets and those of the other Commonwealth States and New Zealand demand a large share of the coal raised. The proportion of the production taken by Australasia increases almost every year, and operates in the direction of steadying the price, by removing the principal cause of fluctuation. The highest average price obtained was in 1854, the first year of the Crimean war, and the third after the commencement of the gold rush, when the price per ton was not less than 20s. 6d. In 1872 the output reached 1,000,000 tons; ten years later it had increased to 2,000,000; and in 1891, to a little over 4,000,000 tons;

the yield decreased to 3,280,000 tons in 1893, but since that date it has steadily increased year by year until 1906, when no less than 7,626,362 tons were raised, the highest production yet recorded.

New South Wales was its own chief customer during 1906, when, out of the total production stated above, the local consumption amounted to 2,664,822 tons, or 34·9 per cent. Victoria was its principal outside customer, taking (including bunker coal) 976,029 tons, or 19·7 per cent. of the total export of 4,961,540 tons. The quantity of coal required for local consumption shows a satisfactory increase during most years, as will be seen from the following statement:—

Year.	Tons.	Year.	Tons.
1896	1,484,610	1902	2,680,552
1897	1,686,968	1903	2,638,652
1898	1,914,455	1904	2,846,942
1899	1,798,505	1905	2,914,685
1900	2,138,165	1906	2,664,822
1901	2,497,441		

The annual consumption per head increased from 16 cwt. in 1877 to over 39·4 cwt. in 1904 and 1905. The larger use of steam for railway locomotives, and for manufacturing, smelting, and other purposes, as well as the multiplication of gas-works, accounts for a great portion of the increase; but it must also be borne in mind that there is a large and growing demand for bunker coal for ocean-going steamers, which up to the end of 1905 appears not as an export, but as required for home consumption. The figures given above for 1906 as the coal used for local consumption are exclusive of bunker coal, and work out at 35·2 cwt. per head of population; worked out on the same basis as for previous years the annual consumption per inhabitant would be nearly 50·9 cwt. The amount of coal taken by the steamers during 1906 was 1,184,738 tons, of which 183,291 tons were consumed on steamers in the coastal trade, 645,459 tons in connection with trade with other British possessions, and 355,988 tons taken by boats trading with foreign countries.

The quantity of coal supplied to customers abroad has also largely increased during this period, as shown in the table below:—

Year.	Tons.	Year.	Tons.
1897	2,696,623	1902	3,261,459
1898	2,791,796	1903	3,716,194
1899	2,798,523	1904	3,172,867
1900	3,369,332	1905	3,718,053
1901	3,470,985	1906	*4,961,540

* Includes 1,184,738 tons of bunker coal.

The exports of 1891 necessarily showed a large advance on those of 1890, when business was paralysed by the strike, nevertheless, compared with the year 1889, the trade of 1891 exhibited satisfactory progress, but in 1892 the exports fell not only below those of 1891, but were less than those of 1889. A further large decrease took place in 1893, but the figures for 1894 and 1895 showed a slight recovery, and since 1896 the improvement has been very decided, the export for 1900 being 570,809 tons higher than that of 1899. The exports during recent years have fluctuated considerably. During 1903, the output was the highest recorded to that date, but in 1904, for reasons given in the earlier part of this chapter, the quantity exported fell to 3,172,867 tons, the lowest since 1899. During 1905 and 1906, however, the exports of coal considerably increased, the quantities so disposed of being 3,718,053 tons and 3,776,804 tons respectively, the latter figure constituting a record as being the largest quantity sent away in any calendar year. Up to the end of 1905, no record was kept of the quantity of bunker coal taken by the various steamers, and the amount was included with that used for home consumption. During 1906, it was ascertained that no less than 1,184,738 tons were exported as bunker coal, but in order that the details given in the following table may be compared with the previous years, only the coal taken away as cargo has been included in the returns for 1906. The customers of New South Wales for coal during each of the last four years will be found in the following table, from which it will be seen how wide is the circle which relies upon the State for the supply of one of the chief necessaries of civilised life:—

Country or Port.	1903.	1904.	1905.	1906.
	Quantity.	Quantity.	Quantity.	Quantity.
	tons.	tons.	tons.	tons.
Victoria	997,912	848,637	922,906	916,971
Queensland	51,443	30,735	41,050	53,587
South Australia	434,773	486,316	525,317	478,485
Western Australia	179,924	177,260	185,250	169,853
Tasmania	96,951	90,343	103,301	100,525
Total, Interstate	1,761,003	1,633,291	1,777,824	1,719,421
New Zealand	270,470	247,254	292,831	215,503
Fiji	50,939	52,144	54,591	19,519
Straits Settlements	66,756	30,810	82,836	215,762
India	49,979	53,839	72,646	46,042
Hong Kong	39,680	17,345	94,762	70,668
Mauritius	9,394	24,407	12,197	12,237
Cape Colony	17,076	7,874	12,505	4,150
Canada	2,058	13,600	12,762	......
Natal	7,730	5,543	1,500	......
United Kingdom	1,018	11,619	23,348	......
New Guinea	2,001	6,997	2,610	1,190
Other British Possessions	7,758	1,757	1,450	977
Total, British Possessions	524,854	473,189	664,038	586,048
Chili	499,778	457,128	462,975	601,044
United States	303,790	155,428	100,705	83,511
Philippine Islands	228,562	205,588	271,693	312,996
Hawaiian Islands	172,130	66,121	119,245	90,635
Peru	49,492	45,485	92,124	109,278
Java	53,709	30,331	47,350	66,342
Mexico	32,048	26,266	46,528	74,737
Panama	24,331	10,292	11,019	11,906
New Caledonia	18,807	19,501	18,192	12,294
South Sea Islands	13,041	11,382	10,341	5,893
Ecuador	11,485	13,833	14,257	15,484
China	11,715	10,699	39,492	71,794
Other Foreign Countries	11,449	14,333	42,270	15,419
Total, Foreign Countries	1,430,337	1,066,387	1,276,191	1,471,333
Grand Total	3,716,194	3,172,867	3,718,053	3,776,802

The wealth of the State in coal is enormous, and the further expansion of the industry may be regarded as almost a certainty. As the great Australian continent is only in the early period of the development of its immense resources, so, also, may the coal-mining industry of New South Wales be said to be in its infancy. It is, however, a very vigorous infancy, giving promise of a great future.

In the following statement will be found the results of a number of proximate analyses made by the Government Geologist of coals from the various districts of New South Wales:—

Districts.	Composition.				
	Hygroscopic Moisture.	Volatile Hydro-carbons.	Fixed Carbon.	Ash.	Sulphur.
	per cent.	per cent.	per cent.	per cent.	per cent.
Northern	1·93	35·13	54·14	8·80	0·54
Southern	0·97	23·10	65·26	10·67	0·46
Western	1·87	31·49	52·61	14·03	0·63
Average	1·74	32·43	56·07	9·76	0·53

Similar analyses of English coal are shown in the following table:—

Description of Coals.	Composition.				
	Moisture.	Volatile matter.	Fixed Carbon.	Ash.	Sulphur.
	per cent.	per cent.	per cent.	per cent.	per cent.
Anthracite	1·50	6·25	81·75	10·50	1·25
Bituminous	2·50	39·00	50·00	8·50	2·00
Semi-bituminous	2·00	18·25	71·25	8·50	1·75
Average Bituminous Coals	2·25	28·63	60·62	8·50	1·88

Excluding the Welsh anthracite, by far the best coal known for steaming purposes, it will be seen from the above analyses that the New South Wales product, especially that obtained from the Southern and Northern mines, compares favourably as a heat producer with the average bituminous coals. In addition, it has the advantage of a greater specific gravity, while containing less sulphur. The result of the analyses showed that the mean specific gravity of the Northern district coals was 1·338, and of the Southern and Western coals, 1·389, while the mean of a number of samples of British coals was 1·279. The gas-producing qualities of New South Wales coal, especially that obtained from the Northern mines, are superior to those of English coal, but the latter has a slightly smaller percentage of ash. Illawarra coal is chiefly used by the naval authorities on the Australian station, and on the large ocean-going steamers, mainly on account of its cheapness, for the steam-producing power of the coal from the Northern districts of the State is almost equal to that of the Southern article.

COKE.

The quantities of coke manufactured in New South Wales since 1890 were as follow:—

Year.	Quantity.			Total value.
	Northern District.	Southern and Western Districts.	Total.	
	tons.	tons.	tons.	£
1890	15,886	15,211	31,097	41,147
1891	9,474	20,836	30,310	34,473
1892	5,245	2,654	7,899	8,852
1893	12,262	5,596	17,858	20,233
1894	13,602	20,856	34,458	33,209
1895	11,326	16,304	27,630	24,683
1896	10,399	15,953	26,352	21,851
1897	21,012	43,190	64,202	45,392
1898	34,422	47,800	82,222	64,135
1899	43,912	52,618	96,530	77,139
1900	49,374	76,839	126,213	109,629
1901	35,939	92,943	128,882	105,665
1902	24,219	102,653	126,872	89,605
1903	34,730	125,862	160,592	108,764
1904	31,825	139,181	171,006	110,692
1905	25,329	137,632	162,961	100,306
1906	55,991	130,069	186,060	110,607
Total	434,947	1,046,197	1,481,144	1,106,364

The following table shows the quantities of coke imported into New South Wales during the same period:—

Year.	Quantity.	Year.	Quantity.
	tons.		tons.
1890	38,174	1899	426
1891	76,542	1900	507
1892	61,852	1901	66
1893	61,874	1902	432
1894	47,586	1903	310
1895	42,526	1904	614
1896	43,134	1905	480
1897	32,451	1906	997
1898	4,000		

Almost the whole of this was imported *viâ* South Australia to the Barrier district, where it was used for smelting purposes. The returns of the South Australian Customs Department show that by far the largest quantities of this coke came originally from the United Kingdom and from Germany. At Broken Hill, the Proprietary Company alone have consumed about 1,000 tons per week. It seems a singular circumstance that the silver-miners of New South Wales should have until recent years so largely relied on England and Germany for their coke when the State possesses unlimited supplies of coal from which excellent coke can be manufactured. It is true that complaints have been made that the colonial coke contains a higher percentage of ash than the imported article, and that it is too friable, causing a large percentage of loss through abrasion in transport, while the coke, it has been said, arrives in such small pieces as to be unfit for smelting the fine lead ores. Recently, however, the Government Geologist stated that, although there was room for material improvement in the manufacture of coke in this State, both by reducing the percentage of ash, and increasing the density, some of the local article was nearly equal, as regards ash, to the average of the foreign cokes used by the Broken Hill Proprietary Company, while several specimens of locally made cokes contained a smaller percentage of ash than the imported article.

The following analyses of average samples of coke taken recently from the works in the various districts have been made in the laboratory of the Mines Department:—

Composition.	Districts.		
	Northern.	Southern.	Western.
	per cent.	per cent.	per cent.
Volatile matter and moisture	1·65	2·17	6·22
Fixed Carbon	87·19	82·89	78·41
Ash	10·72	14·47	14·67
Sulphur	0·44	0·47	0·70

The specific gravity of the specimens was found to be 1·797 for the Northern district, 1·936 for the Southern, and 2·711 for the Western district.

Owing to the difficulty of obtaining regular supplies of coke, consequent on the abnormal condition of the freight market, the Broken Hill Proprietary Company erected coke works at Bellambi, on the South Coast Railway line. The ovens supply a large proportion of the company's total requirements, and they are so arranged that duplication can be carried out at any time when it may be considered desirable. The Mount Lyell Copper Mining Company have also erected coke works. It would seem that coke of local manufacture has at last overcome the strong prejudice that existed, judging from the great increase in the production in the Illawarra district during the last decade. This is doubtless due to the greater care exercised in its manufacture, and to the employment of a better class of kiln and appliances for cleaning the coal.

At the old Bulli mine a coal seam 6 feet thick has been for about half that thickness transformed into a sort of natural coke, apparently through the intrusion of igneous matter underneath the seam.

Considerable activity is now being displayed in the Illawarra district, where there are eight works all fully employed, and when the good qualities of the locally manufactured coke are recognised, the district will doubtless become not only a smelting, but also a manufacturing centre.

KEROSENE SHALE.

This mineral is found in various parts of New South Wales, but principally at Hartley, Katoomba, Megalong, Bathgate, near Wallerawang, Joadja Creek, Berrima, Mount Kembla, Burragorang, and Greta, and also at Colley Creek, near Murrurundi, in the Capertee district, and in the valley of the Wolgan River. The shale occurs in seams, or lenticular patches of greater or less extent, the largest hitherto discovered not exceeding one mile in length, and varying in thickness from a few inches to 6 feet. It is a species of torbanite or cannel-coal, similar to the boghead mineral of Scotland, but yielding a much larger percentage of volatile hydrocarbon than the Scotch mineral. The richest shale at the Joadja mine, near Mittagong, yields about 130 gallons of crude oil per ton, or 15,400 cubic feet of gas, with an illuminating power equal to forty-eight sperm candles when gas only is extracted from the shale, and has a specific gravity of 1·098, while the best shale from Hartley Vale yields from 150 to 160 gallons of crude oil, or 18,000 cubic feet of gas of forty candle power per ton. The specific gravity of the best specimens of Joadja Creek and Hartley shale is 1·06, the amount of sulphur 0·49 per cent., and the yield of tar 40 gallons per ton. It is found advantageous for mixing with ordinary coal for the manufacture of gas, and is largely exported to Great Britain, America, and other foreign countries, as well as to the neighbouring States. On analysis the following result was obtained from average specimens:—

Volatile Hydrocarbons, including moisture	82·50 per cent.
Fixed Carbon	6·50 ,,
Ash	11·00 ,,

The industry is at present confined to the mines controlled by the Commonwealth Oil Corporation (Ltd.), at Hartley Vale, New Hartley, and Wolgan. This company, which has acquired the interests of the New South Wales Shale and Oil Company, not only raises shale for export, but also manufactures from it petroleum oil and other products. The production of kerosene shale from the opening of the mines in 1865 to the end of 1906 amounts to 1,279,667 tons, of the value of £2,135,445, as shown in the following table:—

Year.	Quantity.	Average price per ton.	Total value.	Year.	Quantity.	Average price per ton.	Total value.
	tons.	£ s. d.	£		tons.	£ s. d.	£
1865–67	7,419	3 9 5	25,749	1894	21,171	1 10 0	31,781
1868–72	58,772	2 13 9	157,886	1895	59,426	1 5 4	75,219
1873–77	71,108	2 12 9	187,793	1896	31,839	1 1 6	34,202
1878–82	152,050	1 18 8	293,729	1897	34,090	1 3 9	40,612
1883	49,250	1 16 11	90,861	1898	29,689	1 1 5	31,834
1884	31,618	2 5 8	72,176	1899	36,719	1 2 3	40,823
1885	27,462	2 9 0	67,239	1900	22,862	0 18 1	20,652
1886	43,563	2 5 11	99,976	1901	54,774	0 15 2	41,489
1887	40,010	2 3 10	87,761	1902	62,880	0 19 0	59,717
1888	34,869	2 2 3	73,612	1903	34,776	0 16 5	28,617
1889	40,561	1 18 3	77,667	1904	37,871	0 14 2	26,771
1890	56,010	1 17 2	104,103	1905	38,226	0 11 1	21,247
1891	40,349	1 18 9	78,160	1906	32,446	0 17 7	28,470
1892	74,197	1 16 8	136,079				
1893	55,660	1 16 4	101,220	Total	1,279,667	1 13 5	2,135,445

The features of this table are the steady fall in the average price of the mineral and the fluctuating production. There is no special reason for the rise and fall in the quantity of shale produced from year to year beyond the irregularity in the orders coming forward for export, and the slackening of mining operations while the mineral at grass is being reduced. It does not necessarily follow, moreover, that the whole production of any one year is put to actual use. A certain proportion of second-grade mineral must be taken out with the first quality, and as there is only an outside demand for the higher grade, it depends altogether upon their ability to compete with the imported oil whether the local companies make use of the second quality at all. With reference to the decline in value and production exhibited since 1902, the cause of the diminished output is attributed to the closing of the Genowlan and Joadja mines. The depreciation in the average price obtained arises from the fact that the output from Hartley Vale was confined to low-grade retorting shale. During 1900 large continuous-feed retorts were erected at Torbane by the New South Wales Shale and Oil Company, and a contract was entered into with the Australian Gas Company to supply one million gallons of crude oil annually for ten years, for the purpose of enriching the water-gas. The introduction of modern machinery and economic methods of retorting shale opens up large possibilities for the profitable treatment of the extensive deposits of low-grade mineral, which is of too poor a quality for exporting. At the shale mines in 1906 there were 185 men employed under ground and 85 above ground, or a total of 270.

DIAMONDS AND OTHER GEM-STONES.

The existence of diamonds and other gem-stones in the territory of New South Wales was recorded as early as 1851. In 1867 they were found at the Cudgegong River, in the Mudgee district, and during the year between 3,000 and 4,000 diamonds were won from the claims of the Australian Diamond Mining Company; but no systematic attempt was made to work the deposits until the year 1872. In the course of the following year deposits of diamantiferous wash were discovered at Bingara, and a somewhat extensive rush took place. A large number of mineral leases were applied for, and it was anticipated that diamond-washing would become a permanent and payable industry. Unfortunately, the stones were small, and the work was suddenly abandoned owing to the great difficulty experienced by miners in finding a ready market for their diamonds. During 1881 the field was officially visited and reported on, and since 1883 operations have been carried on in a desultory fashion, chiefly through lack of sufficient water supply. The diamonds occur in old tertiary river drifts, and in the more recent drifts derived from them. The deposits, which occur in the Inverell, Bingara, Mittagong, Cudgegong, and Narrabri districts, are extensive, and have not yet been thoroughly prospected. The finest of the New South Wales diamonds are harder and much whiter than the South African diamonds, and are classified as on a par with the best Brazilian gems. During the year 1889 the Malacca Company, near Tingha, found diamonds weighing 2,195⅝ carats, valued at £878 5s. In 1891, 1,200 carats of diamonds, valued at £1,050, were won in the Tingha and Inverell districts. In 1892 as many as 2,250 diamonds were obtained from the Monte Christo mine, at Bingara, alone. The majority of diamonds obtained in this district weigh from ⅛ to ⅕ carat, while the largest vary from 2 to 3 carats. The number obtained per load varies very greatly. The Round Mount Company, at Cope's Creek, in the Inverell district, washed 722 loads for 2,685 carats, in 1886, from six loads obtaining the exceptional yield of 1,080 diamonds, weighing 296 carats. The output of the Bingara district during 1893 is said to have been about 15,000 carats, valued at £15,375. In 1894 the only work done was prospecting in the Bingara, Mittagong, and Denison Town districts; and in 1895 the industry was still quiet, but at Boggy Camp diamond field, 16 miles west of Tingha, a revival took place during the year, and 4,100 stones, weighing in the aggregate 1,313 carats, and valued at £492, were obtained. No estimate of the returns in 1896 was obtained from this field; but in 1897 a large area was taken up with a view of working the ground on an extensive scale. The output of gems from the field in 1897 was 8,489 carats, valued at about £3,000. In 1898, 14,920 carats were won, valued at £5,625. During the year a quantity of new machinery was erected, and the field has been considerably developed, although work was greatly hampered through the scarcity of water. The output from the Bingara diamond field for 1898 was set down at 1,573 carats, valued at £434; but work there was practically suspended during the year owing to the scarcity of water. Although the industry was greatly restricted by the inadequate water supply, a considerable amount of prospecting and developmental work was carried out during 1899, and 25,874 carats, valued at £10,350, were won. Of this yield, the Boggy Camp—now known as Copeton—field furnished 25,800 carats, valued at £10,320, the balance being won at Bingara, where the work done was principally of an exploratory character. A considerable falling-off was manifested in the production in 1900, when only 9,828½ carats, valued at £5,663, were won, almost the whole of which were obtained from the Copeton field. In 1901, 9,322 carats, valued at £9,756, were produced. The shutting-down of the Inverell Diamond Field Company's mine at Copeton, in the Tingha division, pending reconstruction of the company, and the suspension of work at the Bingara mines, due to the scarcity of water, were the most important causes of the decrease. The output during the next three years considerably improved, and in 1904, 14,296 carats, valued at £11,620, were obtained, as compared with 12,239 carats, valued at £9,987, in 1903, and 11,995 carats, valued at £11,326, in 1902. The output for 1904 was mainly obtained from the mines at Copeton, the gems being associated with stream tin in considerable quantities. During 1904 the mine at Bingara was worked very profitably till the fall in the price of diamonds in August rendered a curtailment of operations necessary. The considerably reduced output during 1905 and 1906 was due to the fact that the price obtained for the stones of the size and quality won renders diamond-mining unremunerative. For this reason operations at the Monte Christo mine at Bingara were suspended in 1905, and have not yet been resumed. The diamonds won during the last two years were obtained for the most part in the Copeton district. The largest diamond secured in this State was found during 1905 at Mount Werong, 30 miles from Oberon, and weighed 28$\frac{5}{16}$ carats. There is great difficulty in obtaining exact statistics of the production of diamonds in New South Wales, and this difficulty will continue to be experienced until the industry becomes well established, which at present cannot be said to be the case. The following table, compiled from such information as is available, can only be regarded as an approximation, and is believed to considerably understate the actual output:—

Year.	Diamonds.	Carats.	Value.
	No.	No.	£
1867–85*	12,000	2,856	2,952
1886	23,000	5,151	5,151
1887	205	42†	26
1888‡	....	....	....
1889	....	2,195½§	878
1890	....	731½	335
1891	....	1,200	1,050
1892	2,285	457½‖	469
1893	....	15,000¶	15,375
1894	....	1,772¼¶	859
1895	4,100	1,313**	492
1896	....	8,000	2,625
1897	....	9,189	3,250
1898	....	16,493	6,000
1899	....	25,874	10,350
1900	....	9,828½	5,663
1901	....	9,322	9,756
1902	....	11,995	11,326
1903	....	12,239	9,987
1904	....	14,296	11,620
1905	....	6,354	3,745
1906	....	2,827	2,120
Total	....	157,186¾	104,089

* Estimated. † Result only of 19½ loads washed in January (Cope's Creek). ‡ No information obtainable. § Output of Malacca Co. (Inverell) only. ‖ From "Monte Christo" mine (Bingara) only. ¶ Output from Bingara only. ** From Boggy Camp (Tingha) only.

Other gem-stones, including the sapphire, emerald, oriental emerald, ruby, garnet, chrysolite, topaz, zircon, &c., have been found in the gold and tin-bearing drifts and river gravels in numerous localities throughout the State. Precious stones, such as amethyst, cairngorm, and onyx, with other varieties of agate, are not uncommon. The Emerald Proprietary Company, in the Emmaville district, have sunk two shafts, 100 feet and 50 feet, respectively, and 25,000 carats have been won in a rough state. Their value when cut and finished, if of the best quality, is about £2 per carat. Owing to the difficulties of extraction, and the low price of the gems in the London market, the mines were closed for three years. In 1897 they were again opened up, and, although worked for some time during 1898, they are now closed, the company having obtained a suspension of the labour conditions. No gems have been produced during recent years.

The finest opal known is obtained in the upper cretaceous formation at White Cliffs, near Wilcannia. During the year 1895 good stone was found at a depth of 50 feet, and as the lower levels are reached the patches of opal appear to improve in quality and to become more regular and frequent. On Block 7 a patch of stone was found which realised over £3,000. It is difficult to state with exactitude the value of the production; but the following table shows the estimated value of the production to the end of 1906:—

Year.	Value.	Year.	Value.
	£		£
1890	15,600	1899	135,000
1891	....	1900	80,000
1892	2,000	1901	120,000
1893	12,315	1902	140,000
1894	5,684	1903	100,000
1895	6,000	1904	57,000
1896	45,000	1905	59,000
1897	75,000	1906	56,500
1898	80,000	Total	989,099

The foregoing figures are only approximate, as it is impossible to arrive at the total production with any degree of certainty; but they are, if anything, understated. The decrease in the yield during 1904 was attributed to the poor quality of the greater portion of the opal raised, which either had no commercial value or brought only a much-reduced price. This is in marked contrast to the conditions which obtained a few years back, and the number of miners employed in 1904—600—shows a considerable falling-off in consequence. The quality of the stone found on the fields varies considerably, some only realising 10s. per oz., whilst the best quality occasionally realises as much as £70 per oz. in the rough, but prices ranging from £5 to £20 per oz. are of frequent occurrence. The best market for the gems is Germany, where they find a ready sale; but it is stated that the principal gem merchants of Europe have now agents on the field for the purchase of the stone. In 1896, opal was discovered at Purnanga, about 40 miles north-east of White Cliffs, but the scarcity of water has retarded development. Some very fine parcels of stone have been raised in this locality, and it is considered that Purnanga is the nucleus of a fine opal field should a good water supply become available. A new field near the Queensland border, and known as Wallangulla, provided steady employment during 1906 for 100 miners, who obtained opal valued at about £6,500. There is now a settled population on the field, and a considerable expansion of operations is expected.

Topazes are obtained largely at Oban, in the Glen Innes division; but the price obtained is very low, and only one sale, to the amount of £20 was reported during the year 1895. About 60 oz. of topaz were obtained during 1899 in the Kookabookra division, but only realised £4. Turquoises have been discovered at Mount Lorigan, near Wagonga, and work was carried on during the year 1895 by means of aid granted from the Prospecting Vote. In 1896, however, the mine was closed down.

MICA.

Mica is known to exist in many parts of New South Wales, but has never yet been worked, although there is a considerable demand for the article, especially if in blocks of fairly large size that could easily be split into thin plates. It is to be met with in the numerous granitic areas that occur in various parts of the State, especially in the coarsely-crystalline granitic formations in the Silverton district, and elsewhere in the Barrier Ranges.

ASBESTOS.

Asbestos has been found in veins in serpentine in the Gundagai, Rockley, and Barrier Range districts—in the last-named in considerable quantities.

ALUNITE.

Alunite occurs as a large deposit at Bulladelah, about 35 miles from Port Stephens, the yield averaging about 80 per cent. of alum. During 1906, 1,856 tons of alunite, valued at £4,637—as compared with 2,702 tons, valued at £6,750, during 1905, and 370 tons, valued at £925, in 1904—were shipped to England, where it was found that the stone can be treated more cheaply than is possible locally. The reason assigned for the decreased output is that production is regulated according to the requirements of the company controlling the trade. The value of alunite, the product of this State, exported to the end of 1906, is set down at £82,597.

MARBLE, BUILDING STONES, FIRE-CLAYS, AND SLATES.

New South Wales possesses a most abundant supply of all the various kinds of stone and other materials for the building and adornment of its cities. Marble limestone is found in great masses near Wallerawang, Bathurst, Molong, Marulan, Tamworth, and Kempsey, localities which are all within convenient distance of the great arteries of communication; and it is obtainable in all its different varieties. Marble quarries have been opened in the Cow Flat, Marulan, Wallerawang, Orange, and Tamworth districts; but as the total value of the marble raised to the end of 1906 only amounted to £11,880 at point of production, it cannot be said that the deposits are receiving the attention they deserve, and very little effort has yet been made to supply the local demand. The cost of quarrying and the carriage to Sydney are, of course, heavy, but the local marble compares favourably both in form and colouring with the imported article, and should for this reason be more extensively used. During 1906 work was suspended for a period of three months at the white marble quarries at Caloola, but a large quantity of coloured marble was despatched from Borenore and Boree Creek, in the Orange division. It may be interesting to know that the marble which has been used with such pleasing effect in the mural decorations of the new Sydney Railway Station was obtained from the quarries in this division. Granite is found at Bathurst, Moruya, Trial Bay, and on Montagu Island, as well as at many other places throughout the State. Most of the granite hitherto used in Sydney has been obtained from Moruya, a port about 180 miles south of Sydney.

Limestone flux was supplied to the Broken Hill silver-mines from quarries at Tarrawingee, which are connected with the mines by a tramway, 30 miles in length. The quantity so supplied since 1891 is shown in the following table:—

Year.	Quantity.	Value.	Year.	Quantity.	Value.
	tons.	£		tons.	£
1891	74,057	65,357	1895	104,194	68,160
1892	103,368	93,031	1896	88,924	54,261
1893	130,635	111,041	1897	67,590	41,798
1894	89,990	69,290	1898	9,253	5,783

In consequence of the Broken Hill Proprietary Company transferring the whole of their smelting operations to Port Pirie in April, 1898, the demand for flux ceased, and the quarries, thereupon, closed down. A company forwarded large quantities of limestone from Myall Lake to Sydney in 1892, and commenced the manufacture of hydraulic lime; and since the establishment of sulphide works at Cockle Creek, the limestone flux used there has been supplied from this district. In 1899, only 1,000 tons, valued at £750, were so disposed of, but during 1900 considerable activity was displayed in the mining of limestone at Portland, in the Mudgee district, in connection with the Lime and Cement Works, and also in the Rockley division, and at Marulan, Broken Hill, Bulladelah, Taree, Barraba, Parkes, and Peak Hill, where lime has been produced and a quantity of limestone disposed of for flux. In all, 17,000 tons of limestone flux, valued at £3,962, were raised during the year. During 1901 the value of production was stated as £5,794.

The output during the last three years has been well maintained, the quantities raised being used for the manufacture of Portland cement and lime, or disposed of to the smelting companies as flux. The following table shows the quantity raised for flux since 1902, together with the value of cement manufactured:—

Year.	Limestone raised for flux.		Value of Cement manufactured.
	Quantity.	Value at Smelting Works.	
	tons.	£	£
1902	17,352	10,615	46,500
1903	23,824	14,221	55,740
1904	24,975	14,434	54,750
1905	14,941	9,519	88,100
1906	12,788	7,463	128,487

The Hawkesbury formation, over which the City of Sydney is built, provides the city with an inexhaustible supply of sandstone, of the highest quality for building purposes. The material is admirably adapted for architectural effect, being of a pleasing colour, fine grain, and very easily worked. The beauty of Sydney street architecture is due in no inconsiderable degree to the free use of this excellent sandstone.

Basalt, or "blue metal," which is extensively used as road metal and for the ballasting of the railway lines, is obtained at Kiama, Prospect, and Pennant Hills. This stone has not yet been used to any extent for building purposes.

Syenite, commonly called trachyte, is found at Bowral; as a building material it is equal to granite in solidity, and, like granite, it takes a beautiful polish. The success which has attended its first use as a building stone, together with the short distance from the metropolis at which it is to be found, will no doubt cause it to be extensively used in the future for large structures.

Kaolin has been found in many granitic districts, such as Bathurst, Gulgong, Uralla, and Tichbourne, near Parkes. The clay is of excellent quality, and superior to the best obtained in England or France.

The coal measures also contain numerous beds of fire-clays; and in every part of the State excellent clays, well adapted for brick-making purposes, are extensively worked. Slates are found in several districts, but are principally quarried at Gundagai and in the surrounding district, as well as at Bathurst and Goulburn. It will be seen, therefore, that the State has no need to import building material of any description, as it possesses a supply amply sufficient to provide for its own wants and those of its neighbours.

Graphite occurs in the Walcha division, and also at Undercliff, in the New England district, where there are several lodes, one of which is 6 feet wide, but it is of inferior quality. The only mining for plumbago carried on is at the Undercliff mine, where recently a company has entered upon operations with the intention of manufacturing lubricants, crucibles, paints, &c.

PROSPECTING VOTE.

The Government has for some years past devoted a sum annually to encouraging prospecting for gold, and in 1889 the conditions of the vote were so amended as to embrace all minerals. The amount set apart each year was originally £20,000. For the year 1892, however, it was fixed at twice that sum; and during each of the subsequent years up to 1901-2 the sum of £25,000 has been available. For the year 1902-3 the amount voted was reduced to £20,000, and this was further decreased to £15,000 for each of the following years. During the last few years it has been noticed that, with the exception of the Cobar district, where operations were most active, prospecting has not been so vigorously followed as previously. This is accounted for by the demand for competent miners at the established mines, and to the steady employment offering in connection with the agricultural and pastoral industries. It cannot be claimed that the discovery of a large payable field has so far been made by means of the Prospecting Vote, but at the same time it may be said that some rich mines have been opened up with the aid granted, notably the Mount Boppy mine, which is now the premier gold mine of the State, having produced gold to the value of £456,571 during the last six years. The Queen Bee Copper mine owes its present successful position to the aid granted, and the Crowl Creek mine at Shuttleton was opened up indirectly as the results of assistance from the same source. In addition to the employment of labour, the proving of a lode or reef to be payable invariably leads to the taking up of large areas of adjoining land under the Mining Act, from which increased revenue is derived by the State. From the year 1888 to the end of December, 1906, the amount expended in prospecting work was £372,738.

Miners desiring a grant from the vote have to satisfy the Prospecting Board that the locality proposed to be prospected is one likely to yield the mineral sought for, and that the mode of operation is suitable for its discovery. Aid is given in deserving cases up to 50 per cent. of the value of the work done and of the necessary implements and materials. The granting of assistance for sinking from the surface is not favoured, and applicants are generally required to prove their *bonâ-fides* by carrying out a certain amount of work unassisted. Miners who have been assisted from the vote are not entitled to claim any reward that may be offered for the discovery of any new gold or mineral field.

A new clause in the Prospecting Regulations provides that the amount advanced from the vote shall be refunded in the event of the discovery of payable mineral by means of the aid granted.

DIAMOND DRILLS.

The use of the diamond drill in searching for minerals dates only from 1881, and boring by the Department of Mines commenced much later. The drills now in use belong for the most part to the State, and are lent to private persons on terms fixed by regulation. The terms and conditions under which the use of diamond drills may be obtained are as follow:—The application must be accompanied by a plan of proposed site, together with £2 2s. to cover cost of inspection. Persons to whom a drill is granted must pay (1) all charges for freight, &c., on machinery and other necessary appliances from the Diamond Drill Store, Sydney, to site of operations and return of same on truck at most convenient railway station; (2) cost of all fuel and water necessary for working the drill; (3) cost of tubes damaged, destroyed, or which cannot be withdrawn from, or are left in the bore; and (4) pay fortnightly for boring at certain fixed rates per foot, which are determined upon after an inspection of the sites. The rates range from about 8s. per foot upwards according to the nature of the country, inclination of bore, &c. The hirer of the drill is required to provide suitable timber for the erection of the plant, and also five tanks with a capacity of 2,000 gallons; it is also necessary that the site should be prepared for the erection of the plant and a shaft sunk through any alluvium on to rock if necessary. Before commencing operations a deposit of £100 must be lodged as security that the foregoing conditions will be duly observed.

Smaller drills for underground boring are hired to applicants at a fixed rental of £3 per week, the lessee defraying all costs for working, &c., and in addition paying a skilled foreman engaged by the Department at the rate of £3 10s. per week. Hand-borers may also be obtained on reasonable terms.

The depth bored in each year since 1897 was as follows:—

Year.	Depth bored.	Year.	Depth bored.
	feet.		feet.
1897	1,680	1902	2,778
1898	1,326	1903	2,734
1899	1,574	1904	991
1900	1,278	1905	1,050
1901	2,449	1906	356

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LOCAL GOVERNMENT.

New South Wales was slow to adopt a general system of local government, notwithstanding the pressing necessity which existed for such a scheme. In Victoria, Queensland, South Australia, Tasmania, and New Zealand, comprehensive systems of local government were in existence for many years, and the benefits derived therefrom were recognised, not only by the Governments, but by the ratepayers whose property is affected. The central Government was relieved of responsibility and expenditure which formed no part of its proper functions, while the property-owner, though compelled to pay rates from which he was previously free, received benefits which more than compensated for his direct payment.

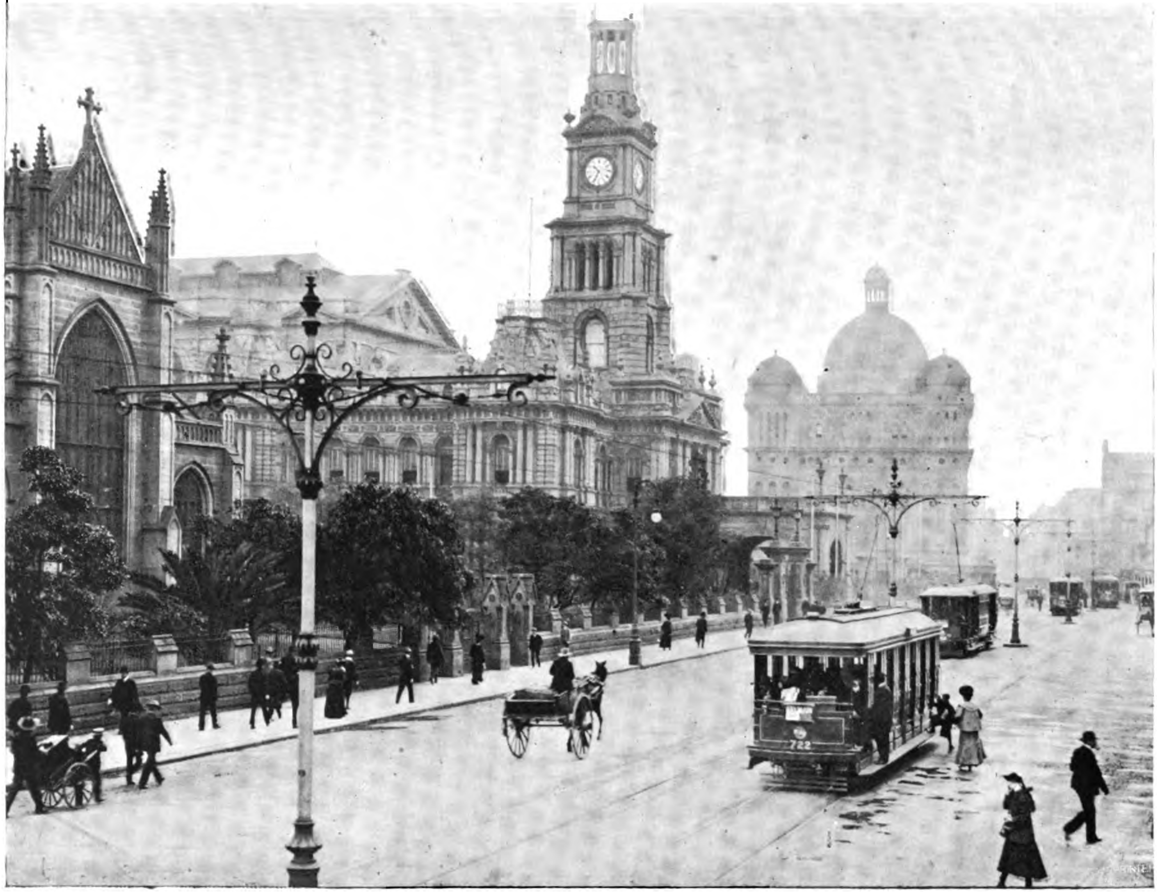
Under the system in New South Wales, which existed prior to 1906, no district, however populous, was compelled to become incorporated, and it was only on the presentation of a petition, signed by at least fifty of the prospective ratepayers, and containing a larger number of signatures than those attached to any counter petition, that a municipality could be formed. This voluntary principle was not conducive to the adoption of a general system of local government; for so long as the central Government continued to construct local works, it was evident that the residents benefited would submit to the absence of local management of their affairs.

In the course of the year 1894 a Bill was submitted to the Legislative Assembly, providing for the incorporation of the entire unincorporated area of the State into boroughs, municipal districts of a maximum area of 400 square miles, and shires; but in consequence of the insertion of a clause which they considered contrary to a vital principle in the Bill, the measure was abandoned by the Government. Other measures were introduced from time to time with no better result, and it was not till the years 1905 and 1906 that the Government was successful in passing legislation which gave the State a large instalment of full local government.

The Shires Act.

This Act, which was passed at the close of the year 1905, provides for the compulsory division of the State, with the exception of the existing municipalities, the whole of the Western Division, the quarantine station, Lord Howe Island, and the islands in Port Jackson, into local government areas, to be called shires. Temporary Councils may be appointed by the Governor to collect the rolls and make the necessary arrangements for the first elections, and the administration of roads, bridges, and other works will be carried on by the central Government until the election of councillors takes place. A sum of not less than £150,000 is to be paid as endowment annually from the Consolidated Revenue Fund, in the following proportions, viz:—First-class shires, from nil up to 10s. per £; second-class, 15s. per £; third-class, 20s.; fourth-class, 25s.; fifth-class, 30s.; and sixth-class, 40s. or more. These rates are payable on the amount of general rates received during the preceding year, but if the necessities of the shire do not warrant an endowment, none will be paid.

On and after the constitution of the shires, the councils may exercise the following powers:—The care, control, construction, fencing, and maintenance of all public places generally, except those vested in the Railway Commissioners, or other public bodies, or trustees, and except national works; regulation of traffic; street and road lighting; prevention of bush fires; flood relief and prevention; construction and maintenance of streets, jetties, wharves, and buildings for the transactions of business; and the administration of the Impounding and Public Watering Places Acts. Other powers may be acquired from time to time if a majority of the



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council decides that they are necessary for the good government of the shire. These are prevention of nuisance; water supply; regulation and licensing of public vehicles and hawkers; management of parks and commons; and the administration of the Public Gates Act and the Native Dog Destruction and Poisoned Baits Acts.

The shires are to be divided into ridings, each riding having equal representation on the council. The members are to be called councillors, and one is to be elected president by the members. The first council is to consist of six members, who shall retire on the last Monday in January, 1908; but at the next election the number may be increased to nine, and the councillors will thereafter hold office for two years only, while the president must be elected each year. All owners and occupiers of ratable property of the annual value of not less than £5, over 21 years of age, male and female, unless not naturalised, are entitled to be entered on the electors' roll, and any male person enrolled is qualified to be nominated as a councillor. The usual conditions as to disqualification are provided for, and also the penalties for acting while not being properly qualified.

An important provision in the Act is that the rates are to be charged on the unimproved value of the land, instead of on the annual rental. The rate to be levied must not be less than one penny, nor more than twopence, in the £, unless the minimum rate is more than sufficient to meet the requirements of the shire, in which case representations may be made to the Governor, who may at his discretion permit a rate of less than 1d. to be levied. The ratable value of coal mines is fixed at 50 per cent. of the gross value of the average annual output for the preceding three years, and of other mining properties at 40 per cent. for the same period. The minimum rate in respect of any portion of land is fixed at 2s. 6d. Another important feature of the Act is that when the council imposes a rate the operation of the Land Tax Act is suspended. The properties exempt from taxation are:—Commons, parks, cemeteries, hospitals, and benevolent institutions, churches, free public libraries, and unoccupied Crown lands.

Further clauses of the Act provide for the appointment of auditors and other officers, the furnishing of statements to the responsible officers, and the issue of regulations and ordinances for various purposes.

According to the *interim* report of the Local Government Commissioners, issued in July, 1905, it was proposed to divide the State into 132 shires, the unimproved value of which was £67,131,466. The Commissioners invited objections from public bodies, and all persons interested, with regard to the boundaries of the shires, and 113 protests were received, of which forty-two were rejected, while those remaining were either approved or held over until the Local Government Extension Bill is further considered. The final report of the Commissioners, which was issued in January, 1906, recommended the establishment of 134 shires, and thirty-two additions to existing municipalities.

At the end of 1860 the total area incorporated under the Municipalities Act was 409 square miles; in ten years this had increased to 649 miles only; in 1880 to 1,482 miles; in 1890 to 2,387 miles; in 1899 to 2,763; and in 1906 to 2,830 square miles—a very insignificant total compared with the whole area of the territory. The subjoined figures give the incorporated and unincorporated areas in 1906, in each of the three great divisions of the State:—

Division.	Incorporated Area.	Unincorporated Area.
	square miles.	square miles.
Eastern	1,977	92,479
Central...........	571	86,086
Western	282	124,671
Total.........	2,830	303,236

In addition to the ordinary form of municipal local government, there are various boards and trusts with local jurisdiction, to the operations of which allusion will hereafter be made. The control of water supply and sewerage of the Metropolitan and Hunter districts is relegated to separate boards. At Hay, Wentworth, and Balranald irrigation trusts have been formed; and further particulars relating to them will be found on page 712. The Metropolitan and the Country Towns Water Supply and Sewerage Acts, the Fire Brigades Act, the Sydney Harbour Trust Act, and the Metropolitan Traffic Act, were all passed with the object of extending the principle of local government, and boards have been established to carry out the provisions of some of these Acts.

Leaving out of consideration the expenditure on works of national importance, the Government has, during the past forty-six years and a half, expended no less than £40,181,000 on works of a purely local character, not including school buildings. Of this sum £26,806,500 was laid out in the country districts, and £13,374,500 in the metropolitan. The division of the State into local government districts will not necessarily be followed by an entire stoppage of the direct expenditure on works of local interest by the central Government, but the larger portion of the works now undertaken by Government will be left to the local authorities, who, having to provide the expenditure, would probably see that it is laid out to the best advantage. Adopting the two divisions of metropolitan and country, the expenditure on account of public works in each since 1860 is given below. Out of the total metropolitan expenditure, £9,347,800 was spent on tramways and water supply and sewerage works, which are sources of revenue, while in the country districts the cost of similar works totalled £2,268,300 only.

Year.	Country Districts.		Metropolitan District.		Total.	
	Expenditure.	Per Inhabitant.	Expenditure.	Per Inhabitant.	Expenditure.	Per Inhabitant.
	£	£ s. d.	£	£ s. d.	£	£ s. d.
1860–1880	5,649,382	....	1,065,410	....	6,714,792	....
1881	583,471	1 1 10	357,182	1 10 10	940,653	1 4 7
1882	704,892	1 5 5	702,696	2 17 8	1,407,588	1 15 3
1883	758,052	1 6 1	931,615	3 12 7	1,689,667	2 0 3
1884	940,858	1 10 8	669,209	2 9 5	1,610,067	1 16 5
1885	981,951	1 10 7	704,636	2 9 5	1,686,587	1 16 4
1886	868,923	1 6 0	767,906	2 11 1	1,636,829	1 13 9
1887	784,941	1 2 9	556,660	1 15 2	1,341,601	1 6 8
1888	904,477	1 5 9	344,414	1 0 8	1,248,891	1 4 0
1889	798,383	1 2 4	583,786	1 13 2	1,382,169	1 5 11
1890	874,077	1 3 10	444,723	1 4 0	1,318,800	1 3 11
1891	1,126,446	1 10 0	790,491	2 0 6	1,916,937	1 13 7
1892	1,034,686	1 6 11	563,015	1 7 8	1,597,701	1 7 2
1893	790,500	1 0 2	416,100	0 19 10	1,206,600	1 0 1
1894–5*	1,421,000	1 15 4	408,300	0 18 9	1,829,300	1 9 6
1895–6	1,048,200	1 5 8	215,700	0 9 8	1,263,900	1 0 0
1896–7	743,900	0 18 0	306,000	0 13 6	1,049,900	0 16 5
1897-8	728,600	0 17 4	425,600	0 18 5	1,154,200	0 17 9
1898-9	700,500	0 16 6	532,900	1 2 7	1,233,400	0 18 8
1899–1900	802,300	0 18 7	397,600	0 16 6	1,199,900	0 17 10
1900–1	1,061,600	1 4 6	604,400	1 4 9	1,666,000	1 4 7
1901–2	1,135,800	1 5 6	535,600	1 1 4	1,671,400	1 4 0
1902–3	839,700	1 0 0	509,400	0 18 8	1,349,100	0 19 2
1903–4	579,400	0 12 7	189,000	0 7 5	768,400	0 10 9
1904–5	456,800	0 9 8	184,500	0 7 1	641,300	0 8 9
1905–6	487,800	0 10 1	167,600	0 6 4	655,400	0 8 9

* Eighteen months ended June, 1895.

INCORPORATION OF THE CITY OF SYDNEY.

The City of Sydney was incorporated on the 20th July, 1842, and the Sydney Municipal Council was established during the same year, the election of aldermen taking place on the 9th November. Mr. John Hosking was the first Mayor. The city was originally divided into six wards, but at a subsequent adjustment the number was increased to eight. After a few years great dissatisfaction arose in the minds of the citizens in regard to the manner in which the affairs of the Corporation were carried on. A Select Committee of the Legislative Council was appointed in 1849 to inquire into the matter, and it reported in favour of the abolition of the Municipal Council, with a recommendation that its powers should be vested in three Commissioners. This was not carried into effect until 1853, when the Corporation was dissolved, and its authority was transferred to a Commission, consisting of Messrs. G. Elliott, J. Rae, and F. Darvall, who administered the affairs of the city from the beginning of 1854 to the end of 1857. A new Council came into existence at the commencement of 1858. Mr. George Thornton was the first Mayor under the changed order of things, and there were sixteen aldermen—two for each ward. By the Sydney Corporation Act of 1879, the number of aldermen was increased to twenty-four, and each ward had three representatives.

Towards the close of 1900 an Amending Act was passed, dividing the city into twelve wards, each of which was empowered to return two aldermen. The innovation of retiring the whole of the aldermen simultaneously was introduced by providing for the election of a new Council on the 1st December in every second year, re-election of qualified persons being, of course, permitted. A candidate is debarred from expending more than £50 in his endeavour to obtain a seat in the Council. The penalty for exceeding that amount is a fine of £20; and, in the case of an elected candidate, the election is to become void. Another change brought about by the Act is the enfranchisement of sub-tenants and lodgers. Moreover, power is given to the Council to resume land required for opening or enlarging streets and other public places; and, in substitution of auditors chosen by the citizens, Treasury inspectors are, for the future, to check the municipal accounts.

In 1905 a further Amending Act was passed to provide for the better government of the city, especially with regard to the control of hoardings, the proper cleansing of footways, the prevention or regulation of the smoke nuisance from furnaces and chimneys, the regulation and control of refreshment stalls and stands, the control of juvenile hawkers and shoeblacks, and the prevention of betting in public places. The Act also regulates the election of the city members of the Metropolitan Board of Water Supply and Sewerage, and the Fire Brigades Board, and extends the powers of the Council as regards resumptions, in order to provide workmen's dwellings, and further provision is made for the extension of the city boundaries.

SUBURBAN AND COUNTRY MUNICIPALITIES.

The Act by which the City of Sydney was incorporated contained no provision for the extension of the municipal principle to other localities; but in 1843 the first step was taken towards the extension of the system to the country districts by the incorporation, under letters patent, of Campbelltown, Appin, Camden, Narellan, and Picton, as one District Council, which was afterwards, in the course of the same year, under a special Act, subdivided into two by the formation of Campbelltown and Appin into separate Councils.

In 1844 the number of country District Councils had increased to eight, and these, in conjunction with the Municipal Council of Sydney and the Road Trusts, subsequently established, constituted the whole of the local government system prior to 1858. In this year the first important measure relating to general municipal government was enacted. An Act was passed, making provision for dissolving, if necessary, the District Councils, and placing the area controlled by them under municipal bodies. Under its authority thirty-five districts were incorporated, which, with the exception of Cook, joined to Camperdown in 1870, and East St. Leonards, subsequently united to St. Leonards, still exist, although nearly one-half have been reproclaimed in the interim, on account of additions or curtailments of area. The law was amended by the Municipalities Act of 1867, and further amended from time to time.

LOCAL GOVERNMENT ACT, 1906.

As already mentioned, amending Bills were introduced at various times, notably in 1894 and 1901; but in 1906 a very comprehensive measure was passed by Parliament, which considerably alters the present conditions of existing municipalities.

The first important provision is that for the establishment of cities, which may be proclaimed by the Governor, the necessary qualifications being:—Any municipality which had, during the preceding five years, a population of at least 20,000 persons and a revenue of £20,000, and in an independent centre of population. During the year 1907 the municipality of Broken Hill was proclaimed a city, in accordance with the Act. It is also enacted that all municipalities not receiving statutory endowment under the existing Act, shall, if found on investigation to be in necessitous circumstances, be entitled to a sum not exceeding 3s. 4d. in the £ on the general rate collected; but if the revenues are sufficient to meet the reasonable requirements under proper management of the corporations, no endowment will be paid. The rates will be levied on the unimproved value, at an amount to be fixed per £, which must not be less than 1d., but if this rate is more than sufficient to meet the requirements of the municipality it may be reduced. A Council which has levied the general rate of 1d. on the unimproved value may impose such additional rate as may be required either on the improved or unimproved value. Special, local, and loan rates may also be imposed either on the improved or unimproved value at the option of the Council. The conditions as to ratable value are similar to those of the Shires Act, and electors will be enrolled on the same franchise as exists under the Act mentioned. Other important provisions are the power to borrow up to 10 per cent. of the unimproved value, such loans to be guaranteed by the Government; the redistribution and reconstruction of existing areas, so that the municipalities may form portions of shires; the acquisition of land and works; control of cattle-slaughtering and public health; dealing with noxious animals and plants; safety of the public; regulation of hoardings and other structures. The Governor may proclaim any park, road, bridge, or other public work to be a national work which will be maintained by the State, but which may be handed over to the Council at any time. Auditors will in future be appointed, not elected, and Government examiners are to be appointed to inspect the accounts. It is further provided that defaulting Councils are those which (*a*) fail to elect the proper number of aldermen at the prescribed time; (*b*) which fail to make and levy a general rate as required by the Bill; (*c*) those which have ceased to exercise their functions for a period of six months.

BOARDS AND TRUSTS.

The majority of the Boards dealing with local affairs have jurisdiction within the metropolitan area, and work mostly in connection with the local municipalities, although possessing powers independent of these bodies. The Metropolitan Transit Commissioners were appointed under the Public Vehicles Regulation Act of 1873, prior to which date the control of the street traffic was vested in the City Council. The Board originally consisted of three members, but in 1886 the number was increased to four by the appointment of a licensees' representative. In 1899 the Public Vehicles Act was passed to consolidate the Acts for the Regulation of Public Vehicles in the city and police district of Sydney, and four Commissioners, consisting of the Mayor and Inspector-General of Police—by virtue of their respective offices—and a municipal and a licensees' commissioner, were appointed to carry out its provisions. In 1900 further legislation resulted in the passage of the Metropolitan Traffic Act, which repealed the Public Vehicles Act, 1899, and such portions of the Sydney Corporation Act of 1879 and the Municipalities Act, 1897, as were inconsistent with the Act, and placed the complete control of street traffic and the licensing of public vehicles, drivers, and conductors, under the Inspector-General of Police. The receipts during 1905, which were obtained from licenses (of which 3,994 were issued), amounted to £2,531, the expenditure being included in that of the Police Department.

Under the authority of the Fire Brigades Act of 1902, which repealed the 1884 Act, a Metropolitan Fire Brigade Board and forty-two country boards have been established. The cost of maintaining the Metropolitan Brigade is contributed in equal amounts by the Government, the municipalities within the proclaimed area, and the fire insurance companies holding risks within these municipal districts. In 1906 the contributions consisted of £14,700 from the insurance offices interested, and a similar amount from the Government and the city and suburban municipalities. The amount of risk on the 31st December, 1905, was £78,108,749, showing an increase of nearly 31 per cent. in ten years, the total at the close of 1895 having been £59,720,282. The country boards receive subsidies from the Government, the municipalities interested, and the insurance companies, under the same conditions as are in existence with regard to the Metropolitan Board. In addition to the boards constituted under the Act, several municipalities contribute to local fire brigades; and in the chapter dealing with "Accumulation," under the head of Fire Insurance, will be found some particulars respecting the calls attended.

The Metropolitan Board of Water Supply and Sewerage was established in 1887, and that of the Hunter District in 1892; reference to their transactions will be found in subsequent pages.

Prior to 1889 the regulation of the port of Wollongong was subject to the Marine Board of New South Wales. In the year named an Act was passed, which transferred the control of the port to a trust composed of twelve Commissioners, who were empowered to improve, manage, and regulate the port. The revenue during 1894 was £6,507, and the expenditure £7,988. The trust was dissolved in the latter part of 1895, when the Government took over the administration of the port.

The Sydney Harbour Trust was established in the year 1900, and a description of its functions will be found in the chapter dealing with "Shipping." The receipts for the year ended 30th June, 1906, were £270,689, and the expenditure on administration, £76,304. The capital debt on the same date was, approximately, £5,155,288, and the interest payable thereon at the average rate on the public debt would amount to about £180,951, so that there was a net revenue of £13,434, after the payment of interest and working expenses, on the year's transactions.

Irrigation trusts were established at Wentworth, Hay, and Balranald, under special Acts passed in 1890, 1892, and 1893 respectively. It was provided in each case that the members of the Municipal Council for the time being should be the trustees, and that they should, with the permission of the Governor-in-Council, be authorised to borrow money for the purpose of tapping the neighbouring rivers, and of erecting plant and constructing works for the irrigation of a portion of the temporary common, which should be divided into lots and leased to suitable persons. The area brought under the Wentworth Trust consisted of 10,600 acres; and £1,000 was spent in preliminary expenses during 1894. Under a special clause of the Act, however, the trust has now been dissolved, and its powers assumed by the Government, who have constructed the necessary works. The land administered by the Hay Trust, originally comprising 12,847 acres, was thrown open in December, 1893, and at the end of 1894 62 holdings, embracing an area of 778 acres, had been applied for. The principal crops planted were barley, wheat, and oats. An amending Act was passed in 1896, which remodelled the trust, the number of members being increased to six, three of whom are officers of the Public Service. The works were completed by an engineer appointed by the Government, and the area originally vested in the trustees was reduced to about 3,000 acres. The receipts during the year 1905 amounted to £965, including £120 brought forward, and the expenditure was £719, leaving a credit balance at the close of the year of £246. The principal sources of revenue were: Rates £367, and rent £476; while the expenditure consisted chiefly of salaries to engineers and other officers, fuel, stores, &c. At Balranald an area of 1,000 acres has been surveyed, and several blocks of from 5 to 40 acres taken up. Pumping machinery has been erected, and works for the distribution of the water commenced. The trustees have petitioned for the dissolution of the trust, as at Wentworth, and it is now proposed to hand over the administration to the Western Land Board.

MUNICIPALITIES, 1904-5.

Under the provisions of the Municipalities Act, 1897, which consolidated the previous Acts, contiguous districts, with an area of not more than 9 square miles, and a population of not less than 1,000, may be incorporated as boroughs; and districts of not more than 50 square miles, with a population of not less than 500, may be formed into municipal districts, but the designation has been changed to municipality by the Act of 1906. Since the passing of the Act of 1867, the number of municipalities has steadily increased, the total in 1877 having been 76; in 1887, 122; and at the end of the municipal year 1904-5, 194. Notwithstanding the relatively small area incorporated at the close of the municipal year 1904-5, the population within the boundaries of these districts numbered 920,350—equal to an average density of 325 to the square mile, or 180 times that of the rest of the State.

In the City of Sydney there were, in the year 1904-5, 20,252 inhabited houses, and 1,079 other buildings, including vacant dwellings, giving a total of 21,331 dwellings. The inhabited dwellings were occupied by a population of 112,030. In the suburbs of Sydney there were 81,668 houses, in which 411,500 persons dwelt; while in the country municipalities there were 75,549 houses, occupied by 396,820 persons. In the unincorporated portion of the State, at the Census of 1901, there were 104,073 houses, inhabited by 499,370 persons; but no later information on this subject is available.

Authority is given by the Act to maintain the thoroughfares; to construct lighting, sewerage, and water supply works, and to levy the necessary rates in connection therewith; to make and enforce by-laws for the maintenance of the public health and the abatement of nuisances; to license vehicles plying for hire; to borrow on the security of any lands and buildings belonging to the Council, and on the annual revenue, provided the latter does not exceed the estimated amount for five years; and generally to take measures for the material and sanitary condition of the residents. Councils are also empowered to purchase or lease any wharves, jetties, piers, &c., erected within the district, and to borrow money for the purpose of constructing such landing places.

The Sydney Corporation Act directs that valuers shall be appointed from time to time to assess improved property within the city at the fair average annual value, with an allowance for outgoings not exceeding 10 per cent., and the unimproved property at a maximum of 6 per cent. on its capital value, and on the value of such assessment a city rate not exceeding 2s. in the £ may be levied, exclusive of lighting. Appeal Courts are held annually. The rate stood at 16d. from 1891 to 1899, but was increased to 18d. for 1900, and 24d. for 1901. In 1902, it was reduced to 22d., and still further reduced to 21d. in 1903, which was also levied in 1904 and 1905. This rate is the only one at present in force. The Act, however, provides for a special local rate not exceeding 6d. in the £ of annual value, for any work which may be for the particular benefit of one locality, but then only if two-thirds of the ratepayers of such locality petition for the same. Occasional advantage of this power has been taken for street-watering, though not of late years, and the amount now levied covers the expenses of street-lighting and street-watering.

In municipalities one or more persons are appointed every year to make a valuation of all municipal property, and the Councils were formerly empowered to raise revenue by rates on the value so found, not exceeding 1s. in the £ for ordinary purposes, and the same amount for special purposes, with 6d. in addition for street-watering. The amount of each rate was calculated upon nine-tenths of the fair average annual rental of all buildings and cultivated lands, or lands let for pastoral, mining, or other purposes, and upon 5 per cent. of the capital value of the fee-simple of all unimproved lands. The maximum general rate was found inadequate, and special grants of 2s. 6d. to 20s. per £ of general rates collected were voted by Parliament from time to time. None of these special grants applied to the City of Sydney. In addition to the special grants, a total sum of £25,254 was paid during the year 1904-5, principally towards the maintenance of main roads, parks, &c., in municipalities. Under the 1906 Act, however, the rates are to be levied on the unimproved capital value, and are of four kinds, viz.:—General, special, local, and loan rates. The amount of the general rate shall not be less than 1d. per £, and the other rates may be levied as required for the services rendered.

During the municipal year 1905-6 the maximum rate of 1s. in the £ was levied in all the suburban and country municipalities, with the exception of Carcoar and Cooma, which imposed 11d., Wallendbeen, which imposed 10d., and Cudal, Junee, and Peak Hill, which imposed 9d. In Darlington the rate of 12d. included the cost of lighting the borough by gas; and in a few country municipalities the cost of street lighting was also paid out of the general rate. There were 116 municipalities where lighting rates were imposed, ranging from 2d. to 6d. in the £

for gas, 4½d. to 8d. for electric light, and 2d. to 6d. for oil lamps. In only 39 municipalities, exclusive of those supplied by the Metropolitan and Hunter District Water and Sewerage Boards, was there a water rate, viz., 1s. in the £, with eight exceptions—five at 9d., two at 8d., and one at 6d. Manly was the only municipality which has erected waterworks under the Metropolitan Water and Sewerage Act; while Hay was the only country municipality which had taken advantage of the Country Towns Water and Sewerage Act, where a rate was not levied to defray the cost of the service, the supply being optional, and the charge made by meter. Other special rates, mostly for street-watering and sewerage, were levied in some of the municipalities. Only two districts, Broken Hill (½d.) and Kempsey (¼d.), levied a library rate—reading facilities being afforded without charge by the local Council in many other towns, or, on payment, by the local School of Arts or Mechanics' Institute; while fire brigade rates, ranging from ½d. to 1d., were levied in 23 municipalities. Two of the municipalities levied sewerage rates, viz., Narrandera 8d., and Casino 5d., in the £. Although authorised by the Act of 1867 to levy a rate for the purpose of providing the means of education for young children, the municipal bodies have not found it necessary to take advantage of this provision, owing to the excellent system of public instruction in force in the State.

Municipalities which avail themselves of the provisions of the Country Towns Water and Sewerage Act of 1880 are empowered to levy a rate for each service not exceeding a maximum of 5 per cent. on the assessed value of land and tenements, in addition to the ordinary municipal rates. On the 30th June, 1905, there were 39 municipalities with waterworks constructed under the provisions of the Act, but the works at Manly, Richmond, and Wollongong were subsequently transferred to the control of the Metropolitan Board of Water Supply and Sewerage, while works were in progress at the towns shown on page 727.

The Noxious Trades and Cattle Slaughtering Act and the Dairies Supervision Act are administered by the Board of Health; but licensed premises are supervised by the Municipal Councils, who receive the fees. In unincorporated districts the administration of the Acts is entrusted to the police.

In order to aid municipalities in providing for the expenditure attending their inception, the original Act provided for endowment being granted for a period of fifteen years. In each of the first five years after incorporation, every municipality was entitled to a sum equal to the whole amount actually raised by rates or assessments paid during the past half-year; in each of the next succeeding five years, a sum equal to one-half; and in each of the next succeeding five years, a sum equal to one-fourth of the amount so received. After the expiry of these fifteen years the assistance which municipalities may demand from the Government ceased, and further aid from the State must be obtained by special grant. At the end of 1906 there were thirty municipalities entitled to statutory endowment.

The City Act of 1879 provided for an annual endowment by the State of £25,000 for a period of ten years. It also enacted that all fees for auctioneers' licenses within the city should be paid over by the Treasury to the City Council. The amount so received in 1895 was £2,137; in 1896, £3,438; in 1897, £2,247; in 1898, £1,409; in 1899, £223; and in 1900, nil. The auctioneers' licenses since 1898 became nominal when compared with former years, owing to a rearrangement in the payment of the fees to the Treasury. Although the Act authorised the raising of loans equal in amount to five years' revenue after the discontinuance of the endowment in 1889, yet it has been found convenient to obtain special Parliamentary sanction for each new loan. Particulars of all City loans will be found on page 723.

About one-half of the municipalities are divided into wards, the number of which is regulated by the population; and, under the original Act, every person, whether male or female, of the full age of 21 years, who on the 7th day of January in any year was the occupier, lessee, or owner of any ratable property within any municipality, and who had paid rates on the same prior to day of election, was entitled to vote. If the property was assessed at an annual value not exceeding £25, the ratepayer was entitled to one vote; if assessed at over £25 and not exceeding £75, to two votes; if over £75 and not exceeding £150, to three votes; and if over £150, to four votes. Under the Act of 1906, however, the franchise is similar to that granted to the shires, as shown on page 707. Voting is by ballot, as in Parliamentary elections; and by special enactment, both owner, tenant, and lodger are entitled to vote in the city of Sydney, the ratepayer being allowed the cumulative vote (if any), the other one vote only. It is impossible to say, in the present state of the returns of the suburban and country municipalities, how many persons in the aggregate had the right to vote; but there were 429 aldermen in suburban and 1,314 in country municipalities, which would give one alderman to 959 residents in the former, and one to 302 in the latter. In December, 1904, the number of electors in the eight wards of the city of Sydney was 37,502, being an average of 1,562 electors per alderman; twenty seats were contested, the votes polled being 12,404. In the other municipalities, in February, 1905, 259 seats were contested. The municipal year in the city of Sydney is from 1st January to 31st December, and the elections are held on the 1st of December in every second year. In all the other municipalities the year begins on the first Tuesday in February, on which day the nominations are made, polls for contested seats being taken within a week; one-third of the aldermen retire annually, and two auditors for the year are elected.

The following table shows the capital and annual values and the assessment of boroughs and municipal districts for the year 1905-6. The amounts shown for the city of Sydney for improved land are inclusive of the values of the vacant lands, which are assessed on the rental value.

Division.	Capital Value of—		Total Amount of General Rate Levied.	Fair Average Annual Value of—	
	Improved Land with Buildings thereon.	All Ratable Property.		Improved Land with Buildings thereon.	All Ratable Property.
	£	£	£	£	£
City of Sydney	45,545,700	45,545,700	182,135	2,312,830	2,312,830
Suburbs	50,464,600	55,545,200	166,077	3,408,110	3,662,140
Total, Metropolitan	96,010,300	101,090,900	348,212	5,720,940	5,974,970
Country	36,196,000	39,223,700	126,409	2,590,010	2,741,390
Total	132,206,300	140,314,600	474,621	8,310,950	8,716,360

As previously mentioned, a nominal annual value is frequently set upon unimproved land in order to avoid full rating, and in such cases no accurate estimate can be made of the real value of the property. It may be taken, therefore, that the figures, both in the preceding and the following table, suffer on this account. On the other hand, it has been found difficult to obtain valuations which show the total extent of the decline in the values of real estate, for it is not generally considered that the reduction of the capital value is in ratio to that of the annual value as indicated by the lower rating. It will be observed that, with the exception of the annual value of ratable property in the country districts, both the annual and capital values have increased since the previous assessments were made, and this improvement will probably be sustained during the municipal year 1906-7 :—

Municipal Year.	Metropolitan Area.		Country Municipalities.	Total
	Sydney.	Suburbs.		
	£	£	£	£
1896-7—Annual value	2,237,040	2,904,950	2,461,745	7,603,735
Capital value	44,740,700	46,686,400	36,072,600	127,499,700
1897-8—Annual value	2,173,260	2,849,650	2,407,210	7,430,120
Capital value	43,465,200	44,999,200	34,322,600	122,787,000
1898-9—Annual value	2,145,800	2,819,600	2,413,950	7,379,350
Capital value	43,159,900	43,767,700	33,698,000	120,625,600
1899-1900— Annual value	2,135,700	2,859,500	2,416,900	7,412,100
Capital value	43,128,600	44,335,400	33,749,800	121,213,800
1900-1—Annual value	2,144,830	2,924,800	2,836,130	7,905,760
Capital value	42,896,500	45,220,100	36,429,600	124,546,200
1901-2—Annual value	2,168,500	3,020,200	2,920,500	8,109,200
Capital value	43,370,000	46,690,600	37,936,300	127,996,900
1902-3—Annual value	2,239,750	3,215,520	2,624,890	8,080,160
Capital value	44,795,100	48,618,200	36,606,500	130,019,800
1903-4—Annual value	2,291,780	3,377,890	2,681,750	8,351,420
Capital value	44,834,400	51,337,200	38,046,700	134,218,300
1904-5—Annual value	2,307,800	3,559,060	2,675,200	8,542,060
Capital value	44,889,000	53,968,900	38,355,800	137,213,700
1905-6—Annual value	2,312,830	3,662,140	2,741,390	8,716,360
Capital value	45 545,700	55,545,200	39,223,700	140,314,600

The increase between 1889 and 1894 was very considerable, the annual value having risen from £7,365,444 to £8,460,674, and the capital value from £120,285,095 to £151,226,000. Part of this increase was due to an additional number of districts incorporated; but when allowance is made for these it will still be found that the capital value increased by something like 43 per cent. During the next four years the values fell considerably, the lowest assessments being in the year 1898-9. Since that year, however, a steady increase has taken place, and the totals for 1905-6 are the highest since 1894-5.

The growth of the city and suburbs has been marvellous, and Sydney now stands as the second city of the British Empire, estimated by the annual value of its ratable property, Melbourne ranking fourth. The annual value of property in Sydney and suburbs, covering an area of 91,220 acres, was, in February, 1906, £5,974,970; while the annual value of Greater Melbourne, with an area of 163,480 acres, was £4,628,636. The following are the annual values of some of the principal cities of Great Britain at the latest available dates:—

	£		£		£
London (County)...	41,647,310	Birmingham	2,885,345	Newcastle-on-Tyne..	1,614,097
Glasgow	5,395,000	Leeds	2,075,005	Belfast	1,204,430
Manchester	4,083,119	Bristol	1,775,447	Nottingham	1,196,074
Liverpool	4,416,061	Sheffield............	1,610,931	Hull	1,152,837
Edinburgh	2,924,173	Bradford	1,538,870		

The estimated capital value of all ratable property in municipalities for 1905-6 is shown in the following table:—

Municipality.	Total Capital Value of Ratable Property.	Municipality.	Total Capital Value of Ratable Property
Metropolitan—	£	Suburbs—*continued.*	£
Sydney	45,545,700	Manly	1,064,900
		Marrickville	2,940,700
		Marsfield..	101,000
Suburbs—		Mosman	2,140,700
Alexandria	743,800	Newtown	3,305,200
Annandale	1,195,400	North Sydney..................	4,998,700
Ashfield	2,133,600	Paddington......................	1,956,400
Balmain	3,915,600	Petersham	2,707,700
Bexley..........................	495,500	Randwick	2,291,700
Botany	278,800	Redfern	2,377,000
Botany, North	401,100	Rockdale........................	1,038,700
Burwood	1,658,300	Ryde	591,000
Camperdown	775,200	St. Peter's	636,700
Canterbury.....................	827,400	Strathfield	969,400
Concord	510,000	Vaucluse.........................	280,500
Darlington	271,000	Waterloo.........................	770,200
Drummoyne	898,400	Waverley........................	2,073,100
Enfield..........................	350,700	Willoughby.....................	1,375,000
Erskineville	354,000	Woollahra	3,162,400
Glebe	1,938,400		
Hunter's Hill..................	793,000	Total, Suburbs ......£	55,545,200
Hurstville	486,400		
Kogarah	598,100	Total, Sydney	45,545,700
Lane Cove	521,600		
Leichhardt	1,527,900	Total, Metropolitan...£	101,090,900

Municipality.	Total Capital Value of Ratable Property.	Municipality.	Total Capital Value of Ratable Property.
Country—	£	Country—*continued.*	£
Aberdeen	69,900	Jerilderie	86,500
Albury	775,800	Junee	179,000
Armidale	420,500	Katoomba	402,800
Auburn	360,500	Kempsey	162,300
Ballina	208,800	Kiama	135,600
Balranald	59,400	Lismore	734,300
Bankstown	235,500	Lithgow	556,100
Bathurst	955,400	Liverpool	332,200
Bega	256,300	Maclean	96,600
Berry	312,300	Maitland, East	306,900
Bingara	76,300	Maitland, West	1,031,700
Blayney	146,700	Manilla	93,200
Bombala	71,400	Mittagong	135,500
Bourke	161,200	Moama	159,400
Bowral	248,200	Molong	112,400
Braidwood	141,800	Moree	208,900
Brewarrina	57,500	Morpeth	102,600
Broken Hill	1,210,300	Moruya	83,300
Broughton Vale	64,800	Moss Vale	263,900
Burrowa	115,400	Mudgee	306,600
Cabramatta and Canley Vale	119,100	Mulgoa	82,400
Camden	153,300	Murrumburrah	119,900
Campbelltown	178,700	Murrurundi	66,900
Carcoar	28,000	Murwillumbah	128,400
Casino	235,400	Muswellbrook	188,200
Castlereagh	66,400	Narrabri	140,700
Cobar	226,200	Narrabri, West	31,500
Condoublin	92,200	Narrandera	240,100
Cooma	239,800	Narromine	97,100
Coonamble	190,500	Newcastle and Suburbs—	
Cootamundra	214,800	Newcastle City	2,949,100
Coraki	118,700	Adamstown	245,300
Corowa	227,400	Carrington	213,300
Cowra	207,000	Hamilton	767,800
Cudal	98,500	Lambton	244,000
Cudgegong	400,400	Lambton, New	89,400
Deniliquin	256,600	Merewether	377,500
Dubbo	256,300	Plattsburg	164,000
Dundas	168,300	Stockton	154,000
Dungog	106,000	Wallsend	197,800
Ermington and Rydalmere	70,000	Waratah	521,500
Forbes	376,100	Wickham	761,500
Gerringong	204,900		
Glen Innes	282,200	Total, Newcastle and Suburbs.	6,685,200
Gosford	59,200		
Goulburn	962,300	Nowra	206,300
Grafton	531,400	Nyngan	77,000
Grafton, South	62,400	Orange	497,900
Granville	700,400	Orange, East	185,700
Grenfell	96,700	Parkes	275,700
Greta	36,600	Parramatta	1,398,400
Gulgong	186,100	Peak Hill	30,000
Gundagai	110,100	Penrith	269,800
Gunnedah	106,300	Picton	115,500
Hay	267,100	Port Macquarie	79,700
Hill End	28,000	Prospect and Sherwood	386,100
Hillgrove	69,600	Queanbeyan	72,700
Hillston	89,000	Quirindi	331,100
Illawarra, Central	802,700	Raymond Terrace	78,000
Illawarra, North	396,400	Richmond	102,500
Ingleburn	59,000	Rookwood	289,600
Inverell	543,100	Scone	93,000
Jamberoo	289,800	Shellharbour	295,400

Municipality.	Total Capital Value of Ratable Property.	Municipality.	Total Capital Value of Ratable Property.
Country—*continued.*	£	Country—*continued.*	£
Shoalhaven, South	150,700	Warren	88,300
Singleton	256,200	Wellington	234,200
Singleton, South	104,700	Wentworth	49,000
Smithfield and Fairfield	172,100	Wilcannia	72,900
St. Mary's	154,700	Windsor	204,100
Tamworth	626,000	Wingham	71,100
Taree	99,000	Wollongong	570,300
Temora	136,000	Wrightville	36,000
Tenterfield	225,700	Wyalong	75,100
Tumut	113,400	Yass	210,200
Ulladulla	291,500	Young	265,300
Ulmarra	249,900		
Uralla	58,000	Total, Country £	39,223,700
Wagga Wagga	471,700		
Walcha	124,600	Total, Metropolitan	101,090,900
Wallendbeen	121,100		
Warialda	46,300	Total £	140,314,600

Mining property is subject to rating only in respect of the value of the surface area and of the buildings erected thereon, and this value is included in the amounts set down in the above table. At Broken Hill, however, the Council has an arrangement with the Broken Hill Proprietary, by which the latter pays a royalty on the output. Mines not working or non-productive are exempt.

The total revenue collected by all the municipalities of the State (exclusive of refunds and proceeds of loans) during the year 1904-5 amounted to £852,744, including the State endowments and grants of £24,225. The chief heads of revenue were as stated below. The grants for roads and bridges are shown separately, as they are almost exclusively for the maintenance of Government thoroughfares in municipalities. In "other rates" are included the sanitary charges—where these are collected by the municipalities—although they are not levied at so much per £, but represent fees for direct services:—

Division.	General Rates.	Other Rates.	Endowments and Grants.	Road Grants.	Other Revenue.	Total.
	£	£	£	£	£	£
Sydney—City	179,154	......	......	......	88,233	267,387
,, Suburbs	165,374	64,416	423	3,558	24,398	258,169
Country	122,059	150,338	10,703	9,541	34,547	327,188
Total	466,587	214,754	11,126	13,099	147,178	852,744

The general rates amounted to £466,587—1s. in the £ being the general rate of all municipalities except the city of Sydney, which levied 1s. 9d., while a few other exceptions will be found mentioned on page 713. No special rate is levied in the city, and in order to make the comparison complete, the cost of lighting and of street-watering should be deducted from the general rates. The amount spent for the former service during 1905 was £22,991, inclusive of partial cost of electric lighting, equal to about 2¼d. in the £; and on street-watering and sanding, £6,051, equal to ⅝d. in the £.

Other rates and charges—for lighting, water, and other services—are levied in many municipalities, and the receipts under this head amounted in 1904-5 to £214,754. This sum does not include the proceeds of rates levied by the Metropolitan and Hunter District Water and Sewerage Boards, and the water supplies of Campbelltown, Liverpool, Richmond, Camden, and Wollongong, which, though actually local rates, are not collected by the municipalities affected by them. The amount received from the sources specified during 1904-5 was £503,992, making, with the sum already mentioned, £718,746 as the total charge for these special services. The whole of the city of Sydney and suburbs is supplied with water by the Metropolitan Board, while the greater part of Newcastle and Maitland and their suburbs are served by the Hunter District Board.

The endowments and grants amounted to only 2·84 per cent. of the total revenue, the sum being equivalent to 6½d. per head of the total population within incorporated areas, and to 4·14 per cent., or 7½d. per head, excluding the city of Sydney. The proportion which each source of revenue bears to the whole varies considerably, as the following statement shows:—

Division.	General Rates.	Other Rates.	Endowments and Grants.	Other Revenue.
	per cent.	per cent.	per cent.	per cent.
Sydney—City	67·00	....	....	33·00
„ Suburbs	64·06	24·98	1·51	9·45
Country	37·30	45·95	6·19	10·56
Total	54·72	25·18	2·84	17·26

It will be seen from the table on page 719 that the gross revenue of all municipalities, not including the State endowment and grants, was £828,519; if to this be added the revenue of the Metropolitan and Hunter District Water and Sewerage Boards, the total will reach £1,332,511. This may be taken as the whole burthen of local taxation, and is equivalent to about £1 8s. 11d. per head of the population residing within the limits of incorporated districts, and to 15·29 per cent., or 3s. 0¾d. in the £, of the total annual value of all ratable property. The amounts levied in England and Wales per £ of valuation during the year 1905 were as follow:—London County Council, 6s. 10d.; county boroughs, 7s.; other boroughs and urban districts, 6s. 2d.; and rural districts, 3s. 9d.

In connection with the municipal accounts of the State, it may here be explained that the returns furnished by the Councils in former years were not so accurate as might be desired, and the amounts of revenue and expenditure had to be taken as the nearest approximation that could be arrived at. It is possible that in some cases items of account, such as transfers and cross entries, which do not really affect the revenue or expenditure, were included, while, on the other hand, items which ought to be included were omitted. The accounts are now checked in the Statistical Office in a systematic manner; but in making comparisons with previous years, it will be well to bear the foregoing remarks in mind.

The total expenditure during 1904-5 by the various municipalities, including payments to sinking funds, but excluding repayments of loans and refunds, amounted to £965,858, which was £118,114 more than the receipts. The municipal expenditure may be grouped under the following heads:—

Head of Expenditure.		Amount.	Per cent.
	£	£	
Salaries and office expenses	85,261		
Other expenditure on administration	27,086		
		112,347	11·63
General works, services, and improvements		346,229	35·85
Lighting		222,261	23·01
Water		38,265	3·96
Sanitary and other expenditure not defrayed out of general rate and endowments		70,642	7·31
Interest on loans and overdrafts		126,569	13·10
Payments to sinking funds		17,382	1·80
Additions to plant, furniture, &c.		5,076	0·53
Miscellaneous		27,087	2·81
Total Expenditure	£	965,858	100·00

Valuers' and auditors' fees, legal expenses, and other items which form part of the cost of administration, are entered in the municipal accounts under "Miscellaneous," of which amount they are estimated to make up one-half. The totals of "Miscellaneous" have, therefore, been adjusted in the above and in the next three tables, in order to give a more correct statement of the proportion which each head bears to the whole. The total expenditure on sanitary services does not appear in the above table, as in many municipalities the fees are paid to the contractor.

The expenditure of the city of Sydney in 1905 reached the sum of £355,558, thus distributed:—

Head of Expenditure.		Amount.	Per cent.
	£	£	
Salaries and office expenses, including Mayor £1,000	17,783		
Other expenditure on administration	5,785		
		23,568	6·63
General works, services, and improvements		121,280	34·11
Lighting		130,571	36·72
Interest on loans and overdraft, including commission and exchange		61,029	17·16
Sinking funds		13,325	3·75
Miscellaneous		5,785	1·63
Total Expenditure	£	355,558	100·00

The large amount for the lighting expenditure is accounted for by the installation of the electric-lighting plant in the city, for which purpose a loan of £225,000 was floated during the years 1904 and 1905.

The expenditure of the suburban boroughs and municipal districts for the year 1904-5 was £272,090, which may be subdivided under the following heads:—

Head of Expenditure.		Amount.	Per cent.
	£	£	
Salaries and office expenses	22,516		
Other expenditure on administration	10,671		
		33,187	12·20
General works, services, and improvements		124,692	45·83
Lighting		41,516	15·26
Sanitary and other expenditure not defrayed out of general rate and endowments		23,409	8·60
Interest on loans and overdrafts		34,041	12·51
Payments to sinking funds		1,797	0·66
Additions to plant, furniture, &c.		2,778	1·02
Miscellaneous		10,670	3·92
Total Expenditure £		272,090	100·00

The proportional cost of administering these municipalities was nearly twice that of the city; but when the smallness of some of the districts is considered, the cost of administration cannot be deemed unreasonably high.

The expenditure of the country municipalities of the State for the year was £338,210, which, divided under the same headings as those given for suburban municipalities, appears as follows:—

Head of Expenditure.		Amount.	Per cent.
	£	£	
Salaries and office expenses	44,962		
Other expenditure on administration	10,631		
		55,593	16·44
General works, services, and improvements		100,257	29·64
Lighting		50,174	14·84
Water		38,265	11·31
Sanitary and other expenditure not defrayed out of general rate and endowments		47,233	13·97
Interest on loans and overdrafts		31,499	9·31
Payments to sinking funds		2,260	0·67
Additions to plant, furniture, &c.		2,298	0·68
Miscellaneous		10,631	3·14
Total Expenditure £		338,210	100·00

In proportion to the total expenditure, the administrative expenses of the country municipalities amounted to 34¾ per cent. more than those of the suburban boroughs. This may be accounted for by the fact that the majority of the country boroughs and municipal districts, though large in area, have but scant population and little revenue, and the proportion of expenses required to defray salaries, &c., is naturally much larger than in the case of the smaller but more populous districts surrounding the metropolis.

The total amount of loans raised during 1904-5 was £117,647, including £70,541 borrowed by the city of Sydney, while a sum of £32,059 was redeemed; these sums include additions to and reductions of secured overdrafts. The sinking funds were increased by £17,382, so that it would appear that the amount unprovided for was increased by £68,206 in the course of the year, including the new loan of the city of Sydney. Most of the new loans in the suburban and country districts were renewals, opportunity naturally being taken of the general reduction in the rates of interest to considerably reduce, when practicable, the annual liability in respect of interest charges. The total amount of loans, apart from the liability of the State under the Country Towns Water and Sewerage Act, outstanding at the close of the year, was £3,032,439; and towards meeting this amount there was at the credit of the sinking funds a sum of £169,444, leaving £2,862,995 not provided for. The total amount authorised to be borrowed by the municipalities was greater than the amount actually raised, for in some cases the full amount was not issued, and in others the secured overdraft was less than the amount of securities lodged with the bank. Rates of interest ranged from 2½ per cent.—which was carried by £12,753—to 8 per cent., which, however, was only payable on £223; and the amount paid as interest on loans and overdrafts during the year was £126,569. Adding to the amount of loans the unsecured bank overdrafts, £113,830, on which rates vary from 5 to 8 per cent., a total of interest-bearing indebtedness of £3,146,269 is found, at an average rate of interest of 4·02 per cent.—viz., 3·58 per cent. on the loans of the City of Sydney; 4·27 per cent. on those of the suburban municipalities; and 4·88 per cent. on those of the country municipalities. The total debt per head of population living in municipalities amounts to £3 8s. 4½d., or, if allowance be made for sinking funds, £3 4s. 8d., while the yearly charge for interest is 2s. 9d. per head. These sums, viewed apart from the resources of the municipalities, are by no means formidable.

The following are the outstanding loans of the City of Sydney at the close of 1905:—

Where floated.	Fund.	Amount.	Rate.	When due.
		£	per cent.	
London	City	60,000	4	1912
Sydney	,,	220,000	4	1926
,,	,,	20,000	3½	1926
London	Public Markets	300,000	4	1919
Sydney	,, ,,	150,000	3½	1922
London	Streets Loan	100,000	4	1912
Sydney	,, ,,	100,000	4	1928
,,	Town Hall	35,000	6	1906
London	,, ,,	200,000	4	1912
,,	Moore-street Improvement	250,000	4	1913
Sydney	Electric Lighting	225,000	4	1929
Total £		1,660,000	....	....

It will thus be seen that the loans are redeemable at various periods from 1906 to 1929, the largest amount to be met being £360,000 in 1912, and the smallest, £35,000, in 1906. The total amount to be repaid in London was £910,000, and the total amount of debentures held locally was £750,000.

The majority of the loans are renewable at maturity on the authority of the several Acts, and sinking funds have been established in connection with most of the issues, the aggregate amount of which, at the end of 1905, was £153,821. The outstanding loans and secured overdrafts of the other municipalities range from £69,500 to £150.

The subjoined statement indicates those municipalities which had contracted liabilities amounting to £5,000 and over at the beginning of 1905. Unsecured overdrafts have not been taken into account:—

Municipality.	Amount.	Municipality.	Amount.	Municipality.	Amount.
Metropolitan—	£	Metropolitan—*cont.*	£	Country—*cont.*	£
City of Sydney	1,660,000	Strathfield	6,500	Lithgow	8,000
Alexandria	17,000	Waterloo	17,000	Liverpool	12,000
Annandale	13,875	Waverley	49,500		
		Willoughby	17,917	Maitland, West	16,374
Ashfield	18,000	Woollahra	23,400	Molong	5,100
Balmain	69,500	Others (under £5,000)	29,083	Mudgee	5,900
Botany	6,811				
Burwood	26,920	Total, Metropolitan	2,432,961	Narrandera	7,679
				Newcastle	50,623
Camperdown	17,000	Country—		Nowra	5,500
Canterbury	8,850	Armidale	18,000	Orange	16,873
Drummoyne	15,696	Bathurst	12,000	Parramatta	55,100
Erskineville	10,000	Bega	6,000		
				Penrith	23,000
Glebe	23,790	Bourke	7,500	Prospect and Sherwood	6,000
Hunter's Hill	10,372	Bowral	12,000		
		Broken Hill	5,000	Tamworth	5,000
Leichhardt	35,000	Cootamundra	12,500		
Manly	16,000			Wagga Wagga	19,193
Marrickville	30,000	Dubbo	13,800	Waratah	15,652
Mosman	22,200	Forbes	10,608	Wellington	6,500
		Glen Innes	12,300	Wickham	15,600
Newtown	36,000	Goulburn	10,000	Windsor	6,500
North Sydney	65,622				
Paddington	66,200	Granville	16,700	Wollongong	8,000
Petersham	18,500	Hamilton	7,061	Yass	7,500
		Illawarra, Central	7,800	Young	9,500
Randwick	27,000	Inverell	9,063	Others (under £5,000)	104,704
Redfern	42,335				
Rockdale	14,390	Katoomba	5,000	Total, Country	599,478
Ryde	5,500	Lambton	12,753		
St. Peter's	10,000	Lismore	12,000	Total £	3,032,439

Of the total amount, £1,076,773 was raised in London; £1,934,423 in Sydney or locally; and £21,243 in Victoria. If allowance be made for the £910,000 raised in London by the City Council, it will be seen that the other municipal authorities have relied chiefly on the markets of the State to subscribe to their loan issues.

Against its debt of £1,702,657, which includes £42,657, the amount of the net overdraft at the end of 1905, the city of Sydney possessed assets approximately amounting to £3,662,383, made up as follows:—

	£
Value of made roads and streets, not including value of land	1,594,500
Land, buildings, &c.	1,451,763
Sale-yards	75,000
Plant, stores, and materials	277,884
Sinking funds	153,821
Outstanding rates	2,290
Sundry debtors and cash in hand	76,324
Current account balances	30,801
Total	£3,662,383

The amount shown as the value of plant, &c., includes £251,215 for the electric-lighting plant. Taking the assets at £3,662,383, the indebtedness of the city of Sydney would amount to about 46 per cent. of the total assets.

In addition to the current loans and overdrafts secured by mortgage, &c., to the amount of £1,372,434, shown in the above table, the suburban and country municipalities were, on the 6th February, 1905, also indebted for unsecured bank overdrafts to the amount of £71,173, and on contracts, &c., to a further amount of £66,734, making a current indebtedness of £1,510,341, or over five times the amount of the general rate levied in 1905-6; but an annual sum of £22,152 in the aggregate was also payable by thirty-six municipalities for waterworks, of which a list will be found on page 726. The sum of £471,146 set down below is the value of the works on which this annual liability is payable.

The assets of the suburban and country municipalities on the 6th February, 1905, were as follow:—

	£
Roads and streets, not including land	4,515,600
Town Halls, other buildings, and land	506,252
Waterworks (constructed by Government) £471,146	....
Waterworks (constructed without Government aid)	72,051
Gas-works and electric-lighting plant	237,260
Sale-yards	26,137
Wharves	18,980
Sewerage	71,137
Plant, stores, furniture, and material	78,483
Sinking funds	15,623
Fixed deposits and current bank balances	68,305
Outstanding general and other rates, &c.	183,355
Government endowments and grants accrued	4,878
Sundry accounts due	8,041
Cash in hand	1,761
Total	£5,807,863

The large amount of outstanding rates, £183,355, is in great part made up of accumulations on unimproved properties, the owners of which cannot be traced.

The total indebtedness of the incorporated districts outside the boundaries of the city of Sydney would, apart from the annual liability for waterworks, appear to be only 26 per cent. of the total assets. This consideration of municipalities as a whole, however, does not reveal the fact that some are struggling under a load of debt which is well nigh insupportable.

The amalgamation of the Metropolitan municipalities and those in the Newcastle district is a question which has for some time attracted attention, and it is the intention of the Government to introduce legislation to provide for the establishment of Greater Sydney and Greater Newcastle. It is not probable that any considerable reduction in the cost of administration would be effected by these unifications, as the salaries at present paid are not on a lavish scale; but there is no doubt that increased efficiency would be attained, and the expenditure on works and improvements reduced. Interest-charges on loans would certainly be considerably lessened, for, notwithstanding the reduction in rates during the last few years, a further saving of £6,369 would result if the £772,961 owing by the suburban municipalities carried the average rate paid by the city of Sydney; and in view of the increased importance and more economical working of a Greater Sydney and Greater Newcastle, a further reduction in the rates of future loans, either renewals or for fresh enterprises, might reasonably be expected.

The Municipal Association of New South Wales was formed in 1883, to watch over and protect the interests of the municipal bodies. In the first year there were 63 Councils subscribing, while in 1906 the number was 137. The Mayor of Sydney is *ex officio* president of the Association. Advice is given to, and legal opinions obtained for the members on debatable points arising under the Municipal Act, and a general meeting is held annually in Sydney, usually in the month of September.

WATER SUPPLY FOR COUNTRY TOWNS.

The Country Towns Water Supply and Sewerage Act of 1880 was passed with the object of assisting municipalities to construct general systems of water supply and sewerage. To the end of June, 1905, 39 Municipal Councils had availed themselves of the privileges offered as regards the former service, 36 of which have been gazetted. With respect to sewerage, however, only 7 Councils had profited by the provisions of the Act, 3 of which, viz., Blayney, Casino, and Forbes, have been handed over, while the works at Grenfell, Hay, Lismore, and Narrandera are still incomplete. The amount required for carrying out the works is advanced by the State. The municipality, however, has the option of supervising and constructing the works, failing which the Government undertakes these duties. Under the original Act, the sum advanced was to be repaid by instalments, with interest at the rate of 4 per cent. on the unpaid balances, each annual instalment to be equal to 6 per cent. of the total cost, and the first payment to be made twelve months after the date of the transfer of the works to the municipality; but as it was found that the municipalities which had contracted liabilities in respect of water supply works were unable to comply with these conditions, the Government, in 1894, passed an amending Act which granted them more favourable terms, the rate of interest being reduced to 3½ per cent., and the yearly repayments fixed at a maximum of 100. Under the amending Act of 1905, however, the rate of interest is fixed at 4 per cent. per annum. This Act also provides for the issue of licenses to workmen, for the recovery of rates, and for making by-laws for the assessment of lands, and other purposes.

The following is a statement of the waterworks completed and handed over by the Government at the 30th June, 1905, with the amounts expended, and the sums payable annually for the period of one hundred years, the first repayments having become due within twelve months of various dates ranging from the 31st December, 1893, to the 31st December, 1904. In the calculation of these repayments, the interest on the expenditure has been added, and any payments by the Councils, as well as sums remitted under the authority of the Act, have been deducted.

Municipality.	Amount of Original Debt.	Amount Payable Annually.	Municipality.	Amount of Original Debt.	Amount Payable Annually.
	£	£		£	£
Albury	41,000	1,483	Kiama	7,073	256
Armidale	40,418	1,461	Lismore	10,016	362
Ballina	13,605	492	Lithgow	12,749	461
Balranald	6,000	217	Moama	7,601	275
Bathurst	55,000	1,989	Moree	10,940	396
Berry	4,323	156	Moss Vale	13,000	470
Blayney	10,520	390	Mudgee	17,030	616
Bourke	13,436	486	Nowra	12,593	455
Cobar	26,068	943	Nyngan	9,000	325
Condoublin	7,039	254	Orange	32,688	1,182
Coonamble	6,742	244	Picton	15,951	577
Cootamundra	10,893	394	Tumut	10,238	370
Deniliquin	18,468	668	Wagga Wagga	38,500	1,392
Dubbo	15,238	551	Warren	3,969	143
Forbes	7,968	288	Wellington	12,062	436
Goulburn	55,000	1,989	Wentworth	4,000	145
Hay	7,691	278	Wilcannia	8,381	303
Jerilderie	5,429	196			
Junee	42,000	1,519	Total ....£	612,622	22,152

In the case of Coonamble, a sum of £53 11s. is payable annually for water supplied by a Government artesian bore.

At Forbes, Hay, and Wilcannia, the works were constructed by the municipal authorities, and the expenditure shown in the table is not the actual cost of the works, but the Government valuation. In addition to those mentioned above, waterworks were proposed or in course of construction at Ballina, Berry, Blayney, Broken Hill, Casino, Cooma, Coraki, Cowra, Grafton, Gundagai, Gunnedah, Hay, Hillgrove, Inverell, Jamberoo, Junee, Katoomba, Lismore, Mittagong, Molong, Moree, Narrabri, Nyngan, Parkes, Port Kembla, Quirindi, Singleton, Tamworth, Temora, Tenterfield, Tumut, Walgett, Waratah, Wollongong, and Yass. The total amount expended on these works to the 30th June, 1905, was £303,236, the largest proportions being Junee (£42,769), Parkes (£30,041), and Wollongong (£35,076). None of these undertakings had been handed over to the Councils at the 30th June, 1905, and in some cases the amounts disbursed were very small, being chiefly for preliminary expenses.

Thirteen Municipal Councils have constructed works out of their own resources, and of these seven have also new works constructed by the Government. The estimated values of the works constructed by the municipalities on the 6th February, 1905, were as follow :—

Municipality.	Estimated value.	Municipality.	Estimated value.
	£		£
Condoublin	318	Penrith	9,000
Gunnedah	360	Silverton	250
Jerilderie	119	Singleton	600
Lismore	250	Warren	200
Mudgee	700	Windsor	6,500
Narrandera	8,600		
Nowra	159	Total .. £	72,051
Parramatta	45,000		

The water supply works of Broken Hill and Silverton were constructed by a private company, under a special Act of Parliament passed in 1888; but the former town will shortly have its own works constructed by the Government.

SEWERAGE WORKS.

As previously mentioned, only seven Municipal Councils have made any move towards taking advantage of the Act providing for the carrying out of sewerage works in country towns, the complete systems being in operations in three cases, viz., Blayney, Casino, and Forbes. The indebtedness due to the Government at the 30th June, 1905, was: Blayney, £429; Casino, £3,023; and Forbes, £1,623. It will be seen from the table given below that sewerage systems are in existence in several places; but these have been constructed altogether apart from the Act, and, with few exceptions, the operations have been on a minor scale. The general system of sewerage which is now being carried on in the metropolitan area will supersede the isolated systems of some of the suburban districts, and some of the sewers already constructed will eventually form part of the general scheme. The Metropolitan Board has already taken over part of the sewerage constructed by the city of Sydney and the municipalities of Ashfield, Balmain, Darlington, Glebe, North Sydney, and Redfern. The cost of sewerage not taken over was as follows:—

Municipality.	Length.	Cost of Construction.	Municipality.	Length.	Cost of Construction.
	ma. chs.	£		ma. chs.	£
Annandale	3 7	2,334	Liverpool	....	406
Ashfield	1 16	6,094	Maitland, West	4 14	3,158
Balmain	2 40	2,500	Murrumburrah	0 9	200
Burwood	0 56	900	Narrandera	6 26	5,254
Camperdown	....	5,161	Newcastle	13 0	18,509
Leichhardt	....	4,500	Richmond	0 18	809
North Sydney	7 30	4,850	Singleton	1 0	1,000
Petersham	1 16	4,298	Stockton	....	224
Strathfield	1 7	500	Wagga Wagga	0 33	534
Waterloo	....	3,080	Wentworth	0 20	166
Goulburn	....	1,420	Wickham	0 60	700
Hay	1 0	1,000			
Lismore	0 2	100	Total ......£		67,685

GAS AND ELECTRIC-LIGHTING WORKS.

The Municipalities Act authorises the construction of works for public lighting, and gives the power to provide private consumers with gas; but as regards electric-lighting this cannot be done without the authority of a special Act. The following statement shows the municipalities which have constructed gas-works, and the value of the same in February, 1905:—

Municipality.	Value of Works.	Municipality.	Value of Works.
	£		£
Armidale	12,000	Molong	4,050
Bathurst	19,602	Muswellbrook	5,000
Bega	7,500	Nowra	2,396
Bowral	7,000	Nyngan	80
Cootamundra	7,834	Orange	13,000
Dubbo	10,028	Queanbeyan	852
Forbes	9,668	Wagga Wagga	17,923
Glen Innes	6,800	Waratah	9,327
Lismore	9,000	Wellington	7,298
Lithgow	11,150	Yass	7,442
Liverpool	7,000		
Maitland, East	10,000	Total ......£	184,440

In addition to the above, acetylene gas plants have been established at Carcoar (£130), Central Illawarra (£30), and East Orange (£300).

Similar information is given below of municipalities which have erected electric-lighting plants:—

Municipality.	Value of Plant.	Municipality.	Value of Plant.
	£		£
Sydney	251,215	Tamworth	3,500
Redfern	25,000	Young	6,500
Newcastle	8,000		
Penrith	9,000	Total ......£	303,215

As already mentioned, the city of Sydney obtained powers to erect an electric-lighting plant, and to raise a loan of £250,000 for this purpose. The lights were used for the first time on 8th July, 1904, when parts of the city were illuminated. Since that date great progress has been made, and the public parks, as well as the remainder of the streets under the control of the Council are now installed. The following municipalities are supplied with electric light by private companies:—Broken Hill (houses only) and Moss Vale.

ROADS AND STREETS.

The lengths of streets and lanes within the boundaries of the city of Sydney, at the end of 1905, was 116⅝ miles. Practically all the roadways were formed, kerbed, and either wood-blocked or metalled; the area laid down of the former material was 104 acres, including 23½ acres of Government streets and tram-lines. The value to the city of these streets was estimated at £1,594,500, which sum included £473,100 for footpaths, viz.:—Asphalted, £62,000, and flagged, £411,100. Throughout the suburbs the extent of roads and streets was about 1,491⅞ miles, of which 843¼ miles were metalled, ballasted, or gravelled, 232⅜ miles formed only, 102½ miles cleared and drained, 107¾ miles cleared only, and 206 miles natural surface; and the approximate value of these roadways, with footpaths, culverts, bridges, and similar works, may be set down at £2,367,400. In the country municipalities there were 1,637⅜ miles of metalled, ballasted, or gravelled roads and streets, 1,140⅝ formed only, 676¾ miles cleared and drained, 952½ cleared only, and 1,727⅞ miles natural surface; in all, 6,135⅛ miles, the value of these improvements being estimated at £2,148,200, which, however, can only be regarded as an approximate sum. Government roads have, as far as could be ascertained, been excluded from these totals; nor is the value of land occupied taken into account, but the latter may be set down at £7,305,000.

METROPOLITAN WATER SUPPLY AND SEWERAGE.

With the rapid aggregation of the population in the metropolitan area came the necessity of establishing a system of water supply and sewerage equal to the needs of a great city. Prior to 1887 the control of the water supply of the city and suburbs was in the hands of the City Corporation, and the supply was totally inadequate to meet the demands upon it, while the sewerage system was highly objectionable and inefficient. Several of the suburban Councils had also constructed local systems, as already mentioned.

In 1867 a Royal Commission was appointed to investigate and report upon proposals for supplying water to the city and suburbs. Two years later, after various projects had been considered, the Commissioners submitted a report recommending the adoption of the "Upper Nepean Scheme." A second Royal Commission was appointed in 1875 to report on a sewerage scheme for the metropolis. The report of this Commisison was presented in 1877, and forms the basis of the system now being carried out. As much controversy was evoked by the recommendations of these Commissions, the Government obtained the services of an engineer from England, and, after much patient investigation, he approved of the systems proposed, and recommended them for adoption, and an Act was passed in 1880 to authorise the works being carried out. The first contract in connection with the construction of water supply works was undertaken in November, 1879, and that of sewerage in August, 1880.

In March, 1888, the water supply works had so far advanced that the Government passed an Act establishing a Board of Administration, under the title of the Metropolitan Board of Water Supply and Sewerage, to regulate the water supply and sewerage service in the county of Cumberland, including those under the control of the City Council. The management of the former service was transferred to the Board in May, 1888, and of the latter in September, 1889. The total length of water mains taken over was 355 miles, while on the 30th June, 1906, this had increased to 1,336 miles, inclusive of trunk mains. There were 70¼ miles of sewers in 1889, lengthened to 657 miles in 1906. The Board consists of seven members, three of whom are appointed by the Government, two by the City Council, and two by the suburban and country municipalities within the county of Cumberland which are supplied with water. The Board is subject to the general control of the Minister for Works—a provision considered necessary, as the Government were advancing the whole of the money for the construction of the works, the amount so advanced constituting part of the public debt of the State.

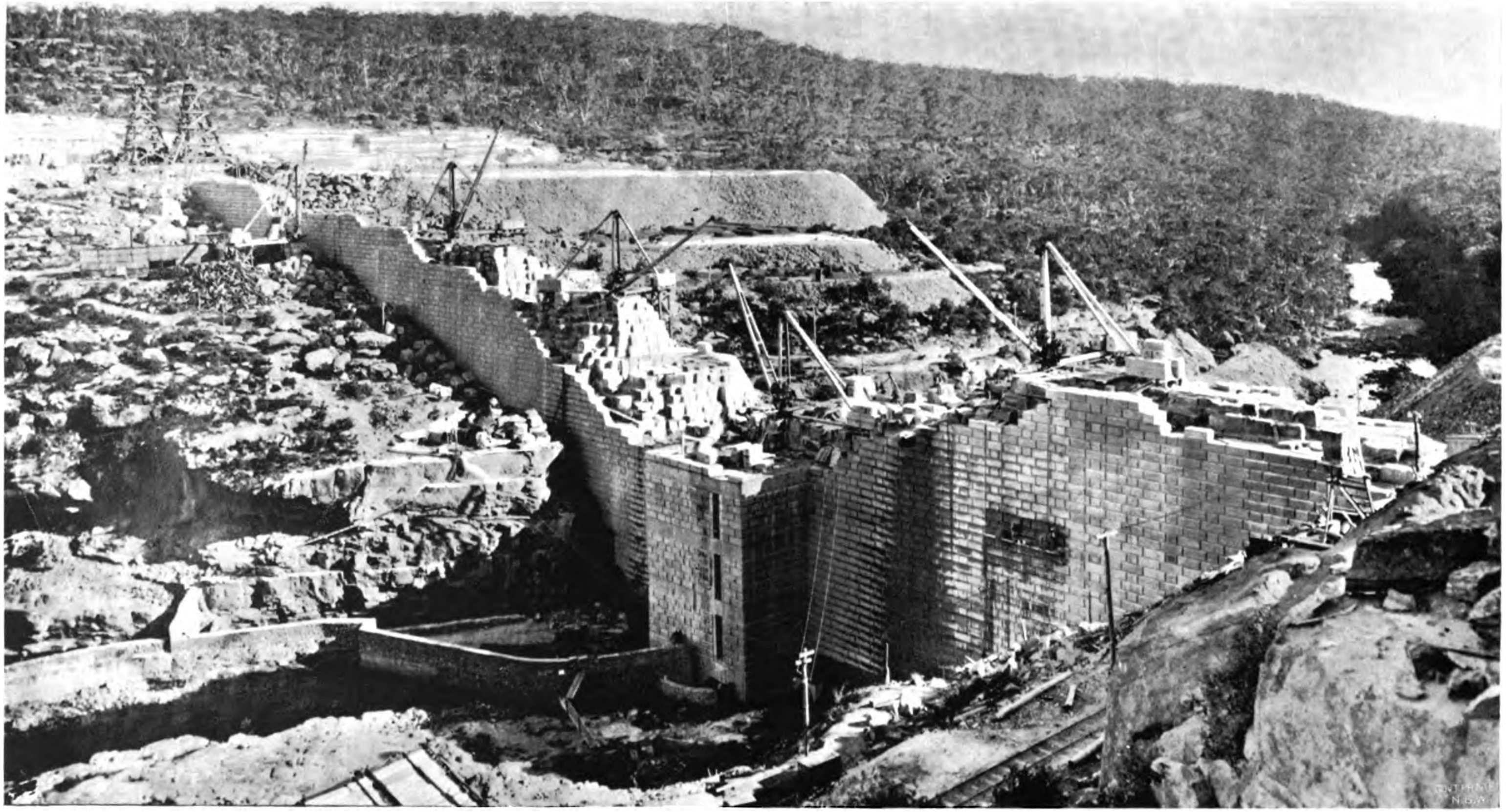
METROPOLITAN WATER SUPPLY.

As early as 1850 authority was given by the Legislative Council to the City Corporation for the construction of water and sewerage works, and a system of water supply from the Lachlan, Bunnerong, and Botany Swamps was adopted. By this scheme the waters of the streams draining these swamps were intercepted at a point near the shore of Botany Bay. A pumping plant was erected here, and the water raised to Crown-street Reservoir, 141 feet above the level of the sea; thence the water was pumped into Paddington Reservoir, at an elevation of 214 feet above sea-level; and to Woollahra, 282 feet above sea-level. The cost of these works was £1,719,565. This system has since been superseded by what is known as the "Upper Nepean Scheme" already referred to, which was designed and carried out by the late Mr. E. O. Moriarty, M.I.C.E. The works were made available in 1888, and have been found ample to provide a constant supply for the wants of the increasing population of Sydney and suburbs.

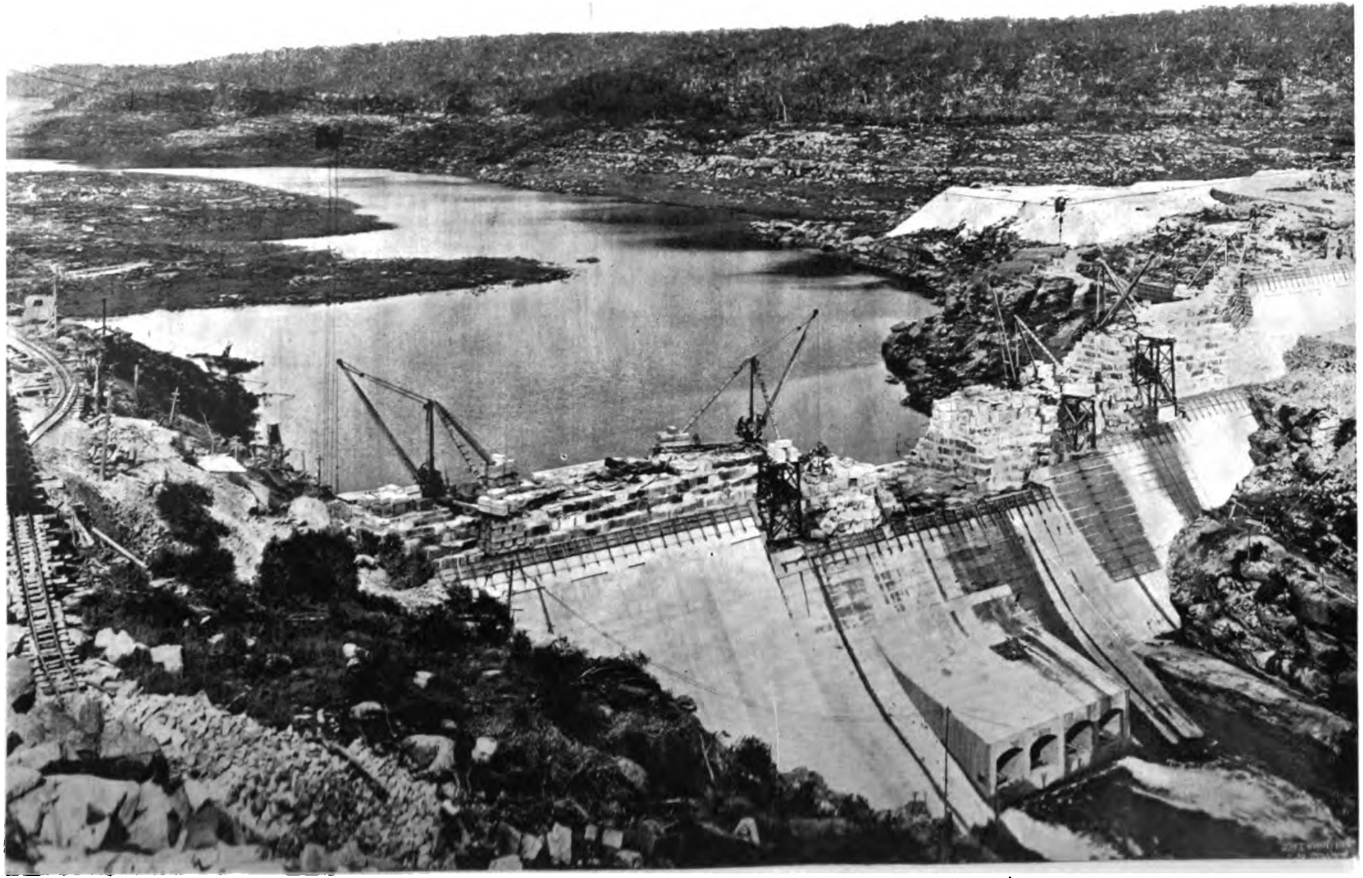
The sources of supply are the waters of the Nepean, Cataract, and Cordeaux Rivers, draining an area of 354 square miles, a catchment enjoying a copious and regular rainfall. The off-take works are built at a height of 437 feet above the level of the sea, and the water flows through a series of conduits—partly tunnel, partly open canal, and in places wrought-iron aqueducts—to Prospect Reservoir, a distance of 40 miles from the farthest source of supply. Here a storage reservoir has been constructed, covering an area, when full, of 1,266⅓ acres, and capable of holding about 11,029,180,000 gallons, of which 5,502,400,000 are available for supply by gravitation. The top water-level is 195 feet above sea-level. The dam is 7,300 feet long, 30 feet wide on top, and is carried to a maximum height of 85·67 feet; it contains some 2,951,950 cubic yards of earthwork, and its water face is covered with heavy bluestone pitching. The conduits above Prospect Reservoir have a capacity of 150 million gallons per day, and for 10 miles below this reservoir the capacity of the canals and pipes equals a maximum of 50 million gallons, while for the last 11 miles the pipes have a capacity of 17·5 million gallons daily. In this work there are:—

Tunnels	**11⅝**	**miles.**
Open canals	**33¼**	**,,**
Wrought-iron pipes, 8 ft., 7 ft. 6 in., and 6 ft. diameter	**5⅜**	**,,**
Cast-iron pipes, 48 in., 42 in., and 30 in. diameter	**13**	**,,**
Total	**63¼**	**miles.**

From Prospect the water flows 5 miles by open canal to the Pipe Head Basin, thence 5 miles by 6-feet wrought-iron pipes to the Potts' Hill



UPSTREAM FACE CATARACT DAM (IN COURSE OF CONSTRUCTION).



DOWNSTREAM FACE CATARACT DAM (IN COURSE OF CONSTRUCTION).

Balance Reservoir, which has a capacity of 96,110,315 gallons, and covers 24½ acres. This reservoir was designed to tide over any interruption in the supply from Prospect, as well as to prevent fluctuation at the head of pressure. The duplication of the 6-feet pipe between the Basin and Potts' Hill, at a cost of £70,205, was recommended, in July, 1897, by the Public Works Committee, as also the raising of the sides of the canal between Prospect and the Basin, thus increasing its capacity to 53½ million gallons per day, at a cost of £39,112. At Potts' Hill the water passes through a series of copper-gauze screens, and is then conducted by two 48-inch mains into Sydney. At Lewisham a bifurcation takes place in one of these mains; one branch supplying the Petersham Reservoir, the other continuing to Crown-street. The Petersham Reservoir is 166 feet above high-water mark, is built of brick, and has a capacity of 2,157,000 gallons. The new 48-inch main, laid in 1893, from Potts' Hill direct to Crown-street, is worked alternately with the old. These two trunk mains are connected at Petersham as an intermediate spot. The Crown-street Reservoir is 21 miles from Prospect. It is of brick, and contains 3½ million gallons, the top water-level being 141 feet above high-water mark. Owing to the topographical configuration of the reticulated area, pumping for the purpose of supplying the upper zones has largely to be resorted to, and no less than 3,430½ million gallons were raised to Centennial Park, Woollahra, and Waverley during the twelve months ended June, 1905. At Crown-street is situated the main pumping station, where are erected three sets of compound high-duty pumping engines, viz., two Worthingtons, and one designed and erected by the Mort's Dock and Engineering Company. No. 1 Worthington is capable of raising 400,000 gallons per hour to the Centennial Park Reservoir, which is 104 feet above Crown-street. No. 2 Worthington can raise 210,000 gallons per hour to the Woollahra Reservoir, 140 feet above Crown-street, and of 1,000,000 gallons capacity; or, if necessary, 200,000 gallons per hour to the Waverley Reservoir, which is 220 feet above the level of the pumps, and has a capacity of 1,087,000 gallons. No. 3 (Mort's) is capable of raising 100,000 gallons per hour to the Waverley tanks. A new covered reservoir, of a capacity of 18,500,000 gallons, has been constructed in the Centennial Park, at a height of 245 feet, for the purpose of ensuring a larger bulk of water within the city limits. This, it is believed, is the largest service tank in the Southern hemisphere. At Ashfield there is a 100,000 gallon wrought-iron tank at an elevation of 223 feet above sea-level. This tank is fed from the Woollahra Reservoir by the Petersham trunk main, and supplies the higher parts of the district. Vaucluse Reservoir is fed from Waverley, and supplies a district of about 1,200 acres around Watson's Bay and South Head. It has a diameter of 107 feet and a depth of 18 feet, and its capacity is 1,000,000 gallons.

North Sydney receives its supply from Potts' Hill, *viâ* Ryde, where there is a reservoir containing 2,000,000 gallons, from which the water is pumped into a million-gallon tank at Ryde village, 234 feet above sea-level, and, by a continuation of the same main, into a pair of tanks, of a joint capacity of 3,000,000 gallons, at Chatswood, at an elevation of 370 feet above high-water mark. A small pumping plant has been erected at Chatswood, and fills two tanks of 1,000,000 and 40,000 gallons capacity at Wahroonga, 7½ miles distant, at an elevation of 720 feet above sea-level; and from Wahroonga the water flows as far as Hornsby, 13 miles to the north-west of Port Jackson. A concrete reservoir of a capacity of 500,000 gallons has been constructed at Pymble. From this reservoir the districts between Pymble and Chatswood are served, thus reducing the abnormal pressure by reason of the supply being from so great a height as Wahroonga.

From the Ryde village tank the whole of Ryde, Gladesville, and Hunter's Hill are supplied; while a 9-inch main extends over the Parramatta and Iron Cove bridges to supply Balmain. An elevated tank, with a capacity of 72,800 gallons, and a reservoir with a capacity of 1,925,000 gallons have been erected for the convenience of residents at Mosman.

The districts of Campbelltown and Liverpool are supplied from the main canal by gravitation. At the latter place, a 4,000,000-gallon earthen reservoir has been constructed, and a tank with a capacity of 250,000 gallons, for the purpose of tiding over any interruption in the flow from the canal. Other districts lying nearer Sydney, viz., Smithfield, Granville, Auburn, and Rookwood, are also supplied *en route*; and at Smithfield there is a 100,000 gallon concrete tank, the top water of which is 175 feet above sea-level. At Penshurst there are two tanks 270 feet above sea-level, one of which has a capacity of 1,000,000 gallons, and the other of 22,800 gallons. These tanks are filled by a Worthington pumping plant at Carlton, which has a raising power of 30,000 gallons per hour. Works for the supply of water to the towns of Camden and Narellan, from a point on the canal near Kenny Hill, were completed in October, 1899, and the scheme has proved satisfactory. In July, 1893, the Board assumed control of the Richmond waterworks, and in April, 1904, the Wollongong works were handed over to the Board.

The total capacity of reservoirs and dams is as under:—

South Sydney	5,807,262,100	gallons.
North Sydney	76,700,200	„
Total	5,883,962,300	„

The weekly chemical analysis made by the Government Analyst continues to show that the water is perfectly suitable for all purposes of a town water supply.

The number of houses connected with the metropolitan water supply on the 30th June, 1906, was 116,202, and the number of persons supplied, 581,010. The average daily consumption during the year ended June, 1906, was 22,393,300 gallons, equivalent to 192 gallons per house, and to 38·5 gallons per head of population supplied. The total amount supplied during the year was no less than 8,173½ million gallons, exclusive of the quantities supplied free for the use of hospitals and charitable institutions, and for flushing streets.

The rate levied for water is 8d. in the £ in the Metropolitan district, while 1s. is the charge for 1,000 gallons by meter. The revenue from the Water Service Branch during the year ended 30th June, 1906, exclusive of the country towns, was £720,263, and the expenditure £228,703, of which £49,072 was for maintenance, £15,415 for management, and £164,216 for interest on loans and depreciation. The liabilities and assets of the Water Supply Branch are not shewn separately, but a combined balance-sheet will be found on page 737. The net revenue for the twelve months ended June, 1906, showed a return of 4·24 per cent. on the actual capital debt of £4,847,978. The rates of interest payable are 3·56 per cent. on the loan expenditure by the State, and from 4 to 6 per cent. on municipal debentures taken over. The Board, however, do not debit their account with interest on the City Council Water Fund, on the ground that this expenditure was made from rates contributed by the citizens, and they, therefore, show a return of 4·40 per cent. for the year 1905-6, instead of 4·24 per cent. set down on the next page, and the rates for the other years differ for the same reason.

The subjoined statement gives the transactions for each year during which the Board was in operation:—

Year.	Capital Cost.		Rates struck.	Expenditure (including interest).	Houses supplied.	Estimated Population served.	Supply.	
	Amount.	Return per cent.					Daily (average).	Total for period.
			£	£	No.	No.	gallons.	gallons.
1888	3,004,557	1·68	125,486	83,482	61,718	296,200	8,144,000	2,972,622,000
1889	3,088,068	3·31	138,923	144,642	67,924	326,000	8,820,000	3,219,244,000
1890	3,189,080	3·48	145,990	147,310	71,501	343,200	8,486,000	3,097,402,000
1891	3,306,649	3·85	165,831	154,154	76,093	365,200	9,540,000	3,482,238,000
1892	3,394,581	3·26	155,886	161,825	78,926	378,900	12,129,000	4,439,274,000
1893	3,409,721	3·52	157,427	158,840	81,288	390,200	12,534,000	4,574,783,000
1894	3,440,614	3·54	161,167	160,706	83,621	401,400	13,739,000	5,014,689,000
*1895	4,078,979	1·60	85,364	91,852	....	....	16,645,000	9,194,922,000
1895-6	4,154,261	3·21	174,357	182,075	85,069	406,300		
1896-7	4,244,550	3·11	175,984	188,221	87,190	418,500	17,659,000	6,445,655,000
1897-8	4,327,543	3·01	178,881	196,264	89,749	434,800	18,284,000	6,673,514,000
1898-9	4,398,965	3·34	194,832	190,048	92,370	450,500	18,795,000	6,860,146,000
1899-1900	4,541,499	3·27	196,616	195,543	95,192	478,000	19,886,000	7,258,373,000
1900-1901	4,676,479	3·29	203,348	201,603	98,298	491,000	21,583,000	7,877,677,000
1901-2	4,800,585	3·45	223,201	219,622	101,966	509,000	21,906,000	7,995,822,000
1902-3	4,866,942	3·07	220,745	230,912	104,681	523,000	16,896,000	6,166,992,000
1903-4	4,922,038	3·33	222,827	223,243	109,191	546,000	18,690,000	6,840,549,000
1904-5	4,608,581	4·02	251,503	222,387	112,343	561,700	21,712,800	7,925,184,000
1905-6	4,847,978	4·24	270,263	228,703	116,202	581,010	22,393,300	8,173,555,000

* Six months ended 30th June.

The reduction in the capital cost during the year 1904-5 is due to an adjustment by the committee appointed to investigate the capital accounts of the Board in May, 1904.

As already stated, the average daily supply of water to persons in the metropolitan district during the year ended June, 1906, was 38·5 gallons, which was the lowest consumption per head of population since 1894, with the exception of the years 1902-3 and 1903-4, when only 32·3 and 34·2 gallons were consumed. The highest supply was reached in 1900-1, when 43·9 gallons were consumed by each inhabitant, and this quantity was closely approached in the following year, when the amount was 43·0 gallons. Since the last-mentioned year, however, the consumption has fallen considerably, owing to more stringent measures being adopted by the Board regarding the use of water.

THE HUNTER DISTRICT WATER SUPPLY.

The water supply works of the Lower Hunter were constructed by the Government under the provisions of the Country Towns Water Supply and Sewerage Act of 1880. In 1892, under the authority of a special Act, a Board was established on similar lines to those of the Metropolitan Water and Sewerage Board, the number of members also being the same—three being nominated by the Governor, one elected by the Municipal Council of Newcastle, two by the adjacent municipalities, and one by the municipalities of East and West Maitland and Morpeth. The following municipalities and unincorporated areas are within the area of the Board's jurisdiction:—Newcastle Division: Adamstown, Argenton, Ash Island, Boolaroo, Carrington, Hamilton, Hexham, Holmesville, Lambton, Lambton (New), Merewether, Minmi, Newcastle, Plattsburg, Wallsend, West Wallsend, Waratah, and Wickham; and in the Maitland Division: Abermain, Bolwarra, East Greta, Heddon Greta, Hinton, Homeville, Kurri Kurri, Lorn, East Maitland, West Maitland, Morpeth, Morpeth-road, Oakhampton, Pelaw Main, Rutherford, Stanford Merthyr, Telarah, and Weston.

The supply of water for the district is pumped from the Hunter River, about a mile and a half up stream from the Belmore Bridge, West Maitland. The pumping engines are situated above flood level, on a hill about 44 chains from the river. At the pumping station there is a settling tank of 1,390,500 gallons; also four filter-beds, 100 feet by 100 feet each, a clear water tank of 589,500 gallons capacity, and a storage reservoir of 172,408,100 gallons available capacity. The filtered water is pumped from the clear water tank into two summit reservoirs, one at East Maitland and one at Buttai. The former is connected by a 10-inch cast-iron main about 4⅙ miles in length, with a capacity of 463,430 gallons, and supplies East Maitland, West Maitland, Morpeth, and neighbouring places. Buttai Reservoir is fed by two rising mains, one riveted steel pipe, 20¾ inches diameter, and a 15-inch cast-iron main, 5⅜ miles in length, and has a capacity of 1,051,010 gallons, the districts supplied being Newcastle, Carrington, Wickham, Hamilton, Waratah, Merewether, Adamstown, New Lambton, Lambton, Wallsend, Plattsburg, Minmi, Cockle Creek, West Wallsend, Holmesville, and the new mining townships of East Greta, Heddon Greta, Stanford Merthyr, Pelaw Main, Kurri Kurri, Abermain, and Weston. In seven of these districts the reservoirs are supplied by gravitation, viz., Minmi (62,209 gallons), Hamilton (402,909 gallons), Wallsend (452,472 gallons), Newcastle (523,613 gallons), Lambton (402,610 gallons), Obelisk Hill, Newcastle (137,125 gallons), West Wallsend (100,000 gallons), Cockle Creek (100,000 gallons), and Waratah (1,800,000 gallons). On the hill at Newcastle there is also a high-level iron tank with a capacity of 20,000 gallons, which is supplied by a small pumping engine placed on the roof of the Newcastle Reservoir.

The length of the mains when the Board was established was 105⅘ miles, which had been increased to 264 miles by the 30th June, 1906.

The operations of the Board are at present entirely confined to water supply, but the sewerage scheme is now being carried out by the Public Works Department, and will be completed without delay. Particulars relating to the operations of the Board are given below. The maximum rate of 1s. in the £ is levied throughout the district. The expenditure from 1898 to 1906 includes the instalment of the sinking fund for the reconstruction of renewable works:—

Year ended 30th June.	Capital Cost.		Rates struck.	Expenditure (includ'g Interest).	Houses Supplied.	Estimated Population served.	Supply.	
	Amount.	Return per cent.					Daily (average).	Total.
	£		£	£	No.	No.	gallons.	gallons.
1893	404,407	3·52	22,651	22,551	3,421	17,100	451,000	164,617,000
1894	405,871	2·96	21,406	23,591	3,848	19,200	419,000	152,850,000
1895	412,732	2·75	20,367	23,467	4,660	23,300	518,000	189,084,000
1896	415,784	2·88	20,779	23,362	6,246	31,200	607,000	222,062,000
1897	428,025	3·16	22,518	23,984	6,931	34,700	731,000	266,980,000
1898	519,414	2·72	25,646	29,699	7,475	37,400	781,000	285,067,000
1899	477,890	2·58	26,478	30,880	7.920	39,600	869,000	317,184,000
1900	480,689	2·59	26,356	30,723	8,423	42,100	909,000	331,651,000
1901	485,835	2·77	27,405	30,948	9,086	45,400	1,005,000	366,889,000
1902	494,644	2·98	29,558	32,109	9,875	49,400	1,119,000	408,508,000
1903	500,784	3·27	31,102	32,217	10,522	52,600	1,113,000	406,172,000
1904	515,565	3·30	31,360	32,361	11,100	55,500	1,093,000	399,954,000
1905	533,270	3·64	34,486	33,714	12,167	60,800	1,266,000	461,936,000
1906	544,798	4·60	40,801	34,801	12,968	64,800	1,479,000	539,654,900

By the Act of 1892, and an amending Act passed in 1894, the capital debt was to be liquidated by annual instalments distributed over 100 years, interest being reckoned at 3½ per cent. In November, 1897, however, a further amending Act was passed, abrogating the repayment of expenditure on "permanent works," and leaving the number of annual instalments in liquidation of the cost of "renewable works" to be fixed by the Government from year to year. Evidence given before the Royal Commission which sat in 1897 showed that the Board estimated their deficiency on the working for five years at £26,700, without any provision having been made for the sinking funds prescribed by the previous Acts. It was urged by the Board that so much of the capital debt should be remitted as would bring down the amount of interest to such a sum as would be covered by the prospective revenue.

The capital cost for 1906, given in the foregoing table, is based upon the statement referred by the Minister for Works to the Board for report, in accordance with the provisions of the 36th section of the amending Act, but the debt has not yet been finally determined.

In addition to the city and suburbs, various country towns are supplied with water by the Metropolitan Board, and their accounts are kept distinct from those of the metropolis. The works at Richmond and Wollongong were constructed under the Country Towns Water Supply and Sewerage Act, and subsequently handed over to the Board, while the districts of Campbelltown, Camden and Narellan, and Liverpool, receive the water by gravitation from the upper canal at Prospect. The following table shows particulars of the capital expenditure, receipts and expenditure, and population supplied in the country districts during the year ended 30th June, 1906:—

District.	Capital Cost.	Rates struck.	Annual Liability.				Population supplied
			Instalment required to pay off cost of reticulation and interest in 100 years.	Maintenance, including proportion of Head Office expenses.	Charges for water supplied from Canal.	Total.	
	£	£	£	£	£	£	No.
Campbelltown	8,264	473	299	121	162	582	1,115
Liverpool	19,796	1,094	716	330	347	1,393	2,380
Camden & Narellan	8,968	389	324	157	181	662	1,200
Richmond	13,894	1,270	502	633	...	1,135	1,500
Wollongong	35,081	1,028	1,268	437	...	1,705	4,000

The populations shown for Richmond and Wollongong are those of the whole municipalities, and probably exceed the number supplied, as only those who sign contracts to take the water are liable to be rated.

METROPOLITAN SEWERAGE WORKS.

The original sewerage works at Sydney were begun in 1853, and in 1889, the date of transfer to the Board, there were, as stated on a previous page, 70¼ miles of old city sewers in existence. The original scheme was designed on what was known as the "combined" system, and comprised four main outfalls discharging into the harbour at Blackwattle Bay, Darling Harbour, Fort Macquarie, and Woolloomooloo Bay. The pollution of the harbour consequent on these outlets, led to the appointment of a Commission of Inquiry, and the outcome of the labours of the Commission was the adoption of the present system.

The new scheme provides for two main outfalls, the northern and southern respectively. The former discharges into the Pacific Ocean at "Ben Buckler," near Bondi, while the southern outfall discharges into the sewage farm at Webb's grant, near Botany Bay. The northern system receives sewage from Waverley, Bondi, Woollahra, Double Bay, Darling Point, Rushcutter's Bay, Elizabeth Bay, and parts of Woolloomooloo. Storm-water channels are also constructed at various points to carry off the superfluous water after heavy rainfalls. The southern main outfall commences at a point on the north side of Cook's River, near Botany Bay, and receives the drainage from Alexandria, Waterloo, Erskineville, Newtown, and portions of the Surry Hills district. The inlet-house, into which the sewage passes, is fitted with the latest machinery for straining the sludge, and for ejecting the fluid after filtration. A portion of the area has been cultivated, and fair crops have been raised.

In connection with the sewerage of the western suburbs, a subsidiary outfall, called the western outfall, has recently been constructed. This starts at a receiving chamber in the Rockdale end of the sewage farm, from which it runs to another chamber about a quarter of a mile to the north-east of Muddy Creek, and thence to a penstock chamber at Marrickville on aqueducts over Wolli Creek and Cook's River. The latter chamber receives the discharges from the eastern, northern, and western branch sewers, and drains parts of Marrickville, Petersham, Stanmore, Newtown, Leichhardt, Annandale, Camperdown, Summer Hill, Ashfield, Canterbury, Enfield, Burwood, Five Dock, and Concord. Another branch outfall has been constructed at Coogee, which discharges into the ocean, and serves the districts of Randwick, Kensington, and Coogee. On the northern side of the city, extensive works have been completed, and in the borough of North Sydney septic tanks were built in 1899 to deal with the sewage matter, while at Middle Harbour, Mosman, and Manly, ample provision has been made for the sanitation of the districts.

The subjoined statement gives the transactions for each year since the sewerage system has been under the control of the Board:—

Year.	Capital Cost.		Rates struck.	Expenditure (including interest).	Houses connected.	Estimated Population served.	Length of Sewers.	Length of Storm-water drains.
	Amount.	Return per cent.						
	£		£	£	No.	No.	miles.	miles.
1890	1,281,045	4·65	81,800	67,026	22,765	109,390	122·03	3·15
1891	1,447,287	3·86	81,302	71,906	26,884	129,000	148·02	4·38
1892	1,606,948	3·77	87,927	79,543	31,402	150,760	172·94	6·62
1893	1,691,462	3·93	93,661	85,363	36,062	173,100	182·34	9·10
1894	1,745,120	3·72	93,134	89,237	39,965	191,800	201·95	9·82
1895*	1,831,611	3·12	43,110	46,605	......	......	......	...
1895–6	1,892,256	2·86	85,486	98,748	44,462	213,400	230·20	14·42
1896–7	2,018,120	2·82	87,652	101,993	47,593	228,400	255·76	18·41
1897–8	2,116,306	2·80	89,688	106,382	51,425	257,100	320·25	20·59
1898–9	2,699,426	2·65	103,955	116,648	58,720	281,900	389·01	22·31
1899–1900	3,073,871	2·58	116,816	135,416	68,060	340,300	461·41	25·67
1900–1901	3,280,427	2·44	125,290	151,870	75,416	370,000	515·62	25·91
1901–2	3,396,582	2·64	135,441	156,919	82,644	413,000	550·40	27·37
1902–3	3,591,155	2·75	145,666	164,243	78,620	400,000	588·38	37·27
1903–4	3,763,234	2·97	156,274	169,277	82,215	410,000	610·73	38·76
1904–5	4,265,424	3·74	213,937	188,876	85,958	430,000	630·42	44·71
1905–6	4,330,397	3·82	220,629	189,895	88,881	444,400	656·84	44·82

* Six months ended 30th June.

The returns per cent. do not agree with those shown in the Board's report, the differences being accounted for in the same manner as has been already explained in the particulars relating to water supply.

During the twelve months ended June, 1906, 2,581 tons of silt were removed from the various reticulation sewers, of which 1,227 tons were removed from the low-level sewers, and 1,550 tons were taken from the suburban division.

On the 30th June, 1906, the total length of sewers was 656·84 miles, and 44·82 miles of storm-water drains were in existence on the same date, making a total of 701·66 miles of sewers and drains, of which length 636 miles were ventilated, the aggregate length of the ventilating shafts erected being 264,255 feet. The number of houses connected and of population served at that date was 88,881 and 444,400 respectively.

The sewerage rate for the city of Sydney and the eastern suburbs up to 1903 was 7d., the northern and the western suburbs being rated at 1s., but in 1904 a uniform rate of 11d. was imposed. The revenue of the Board from sewerage during the year ended June, 1906, was £220,629, chiefly from rates; and the expenditure £189,895, viz., £39,943 for maintenance, £15,425 for management, and £134,527 for interest on loan capital and debentures taken over from the Municipal Councils. No interest, however, is debited by the Board to their account on the amount paid for sewerage works out of consolidated revenue. If this were done, the return per cent. yielded during the year would be 3·82, as shown in the table on page 736, instead of 4·32 set down by the Board.

As previously mentioned, the assets and liabilities of the two services are not now kept separate. The aggregate amounts for the year ended 30th June, 1906, however, are available, and are shown in the following table:—

ASSETS.	£
Sewerage Works	4,326,297
Water Supply Works	4,812,078
Stores, Working Plant, &c.	36,125
Rates Outstanding	24,319
Other Assets	184,964
Total	£9,383,783

LIABILITIES.	£
Capital Debt—Sewerage—	
Interest bearing	4,119,135
Non-interest bearing	211,262
Capital Debt—Water Supply—	
Interest-bearing	4,674,342
Non-interest bearing	173,636
Rates Overpaid	319
Other Liabilities	112,152
Balances of Revenue Accounts	92,937
Total	£9,383,783

The funds necessary for the maintenance and management of the Water Supply and Sewerage services, as well as the sum required to pay interest on the capital debt, are obtained by the previously-mentioned rates levied on the properties situated in the districts benefited by the systems. The assessments of the Municipal Councils are generally accepted by the Boards as the values on which to strike their special rates. In cases of more than ordinary consumption of water, a charge is made according to the quantity used; while fixed charges are imposed for the use of water in certain trades and callings, for gardens, and for the use of animals.

LOCAL OPTION.

The principle of what is known as local option is in operation only in those districts of the State which have been proclaimed under the Municipalities Act. For many years there was a strong agitation in favour of local option, or the right of the inhabitants of any district to control the liquor traffic in that district, and on several occasions unsuccessful attempts were made to legislate upon the subject. The Liquor Act of 1898, which consolidated the former Acts, provided that in every municipality a local option vote should be taken every three years, at the election of aldermen, in which the ratepayers were permitted to vote either "Yes" or "No" on two questions: (1) Whether any new publicans' licenses should be granted during the coming three years in the municipality or ward in question; and (2) whether any removals of publicans' licenses should be allowed within the same period. Over eleven-twentieths of the votes polled were required to make the vote operative in the negative. The advocates of local option were not content with this partial adoption of the principle; they urged its extension to every electorate in the State, all persons on the electoral roll to have a right to vote. They further proposed to place it in the power of a majority of the electors to say whether licensed public-houses should be suffered to exist at all. They also contended that women should have the right to vote upon this question as well as men, and that public-houses should be abolished without compensation to the occupants or owners. Although the local option vote was formerly taken once in three years in every municipality, the year when it was taken was not the same in all. The results of the latest polls show that only a small number of electors voted, and it was evident that very little interest was taken in the matter, except by the extreme advocates of temperance on the one hand, and those interested in the drink traffic on the other, while the general public was apathetic on the subject.

Under the Liquor (Amendment) Act of 1905, which came into force on the 1st of January, 1906, very drastic alterations have been made. The persons entitled to vote are those entered on the parliamentary electoral rolls, instead of on the municipal rolls, and the option with regard to licenses is extended to wine shops and clubs. The vote is to be taken on the same day as that of the general elections, the first of which will be taken at the next election after the passing of the Act. The resolutions to be submitted are:—

(*a*) That the number of existing licenses shall continue.
(*b*) That the number of existing licenses shall be reduced.
(*c*) That no licenses be granted in the electorate.
(*d*) That licenses be restored.

Resolutions (*a*) and (*b*) are carried by a simple majority of the votes, but resolutions (*c*) and (*d*) will not be carried unless three-fifths of the votes are in their favour, while 30 per cent. or more of the electors must vote. If it is decided under resolution (*b*) to reduce the number of licenses, a special Court will decide which premises are to be closed, and the best-conducted hotels will be given a preference over the others. It is also provided that electors can vote for one resolution only, and the results of the poll must be published in the *Gazette*.

PARKS AND RECREATION RESERVES.

It has always been the policy of the State to provide the residents of incorporated towns with parks and reserves for public recreation, and the city of Sydney contains within its boundaries an extent of parks, squares, and public gardens larger than in most of the great cities of the world without regard even to area. The total area covered is 696 acres, or 24 per cent. of the whole of the city proper. In addition to these reserves, the inhabitants of Sydney have the use of 552 acres, formerly reserved for the water supply of the city, but now known as the Centennial Park. This magnificent recreation ground has been cleared and planted, and is laid out with walks and drives, so that it is becoming a favourite resort of the citizens. The suburban municipalities are also well provided for, as they contain, including the Centennial Park, about 3,887 acres of public parks and reserves, or about 4¾ per cent. of their aggregate area, dedicated to, and in some cases purchased for, the people by the Government.

In addition to these parks and reserves, there was dedicated to the people, in December, 1879, a large area of land, situated about 16 miles south of the metropolis, and accessible by railway. This estate, now known as the National Park, with the additions subsequently made in 1880 and 1883, contains a total area of 33,719 acres, surrounding the picturesque bay of Port Hacking, and extending in a southerly direction towards the mountainous district of Illawarra. It is covered with magnificent virgin forests; the scenery is charming, and its beauties attract thousands of visitors.

Another large tract of land, designated Ku-ring-gai Chase, was dedicated in December, 1894, for public use. The area of the Chase is 35,300 acres, and comprises portions of the parishes of Broken Bay, Cowan, Gordon, and South Colah. This park lies not more than 10 miles north of Sydney, and is accessible by railway at various points, or by water *viâ* the Hawkesbury River, several of whose creeks, notably Cowan Creek, flow through it.

In 1905 an area of 248 acres was proclaimed as a recreation ground at Kurnell, on the southern headland of Botany Bay, a spot famous as the landing-place of Captain Cook; and the Parramatta Park (252 acres), although outside the metropolis, might be mentioned on account of its historic interest.

In the country districts, reserves, extending in some cases over 1,000,000 acres, have been proclaimed as temporary commons, whilst considerable areas have been from time to time dedicated as permanent commons attached to inland townships, which are otherwise well provided with parks and reserves within their boundaries.

FAUNA.

MAMMALS, REPTILES, AND FISHES.

(By Edgar R. Waite, F.L.S., late Zoologist, Australian Museum, Sydney.)

MAMMALS.

At the present time mammals are represented in Australia by the Monotremes, the Marsupials, a dog, and many rats and bats, as well as by the marine aquatic animals—whales, seals, and the dugong.

The Monotremes, which are confined to Australia, Tasmania, and New Guinea, comprise the platypus (*Ornithorhynchus anatinus*) and the native porcupine (*Tachyglossus* and *Zaglossus*). The platypus—the "mallangong" and "tambrit" of the aborigines—inhabits Australia and Tasmania, and is one of the most interesting animals known. The male is much larger than the female, and may be distinguished by the horny spur on the hind foot being of very large size. The total length of the male is 24 inches, while the female seldom exceeds 19 inches. In colour, the platypus is of a deep brown above, and of a greyish or yellowish white below, the fur being close and velvety. The muzzle is produced into a broad, flattened beak, which is covered during life with a delicate and sensitive skin; the tail is well developed, broad, and flattened; and the feet are modified into swimming organs, the five toes being extensively webbed; while the teeth, which are unlike those of any other existing mammal, are shed early in life, their place being taken by a series of horny plates. As a mammal, the platypus is chiefly interesting because of the fact that it lays eggs. These are white in appearance; usually two in number, although three and even four are sometimes laid at one time; and in texture they are similar to the eggs produced by reptiles. When hatched, the naked and helpless young are nourished on their mother's milk, as in the case of all mammals. The nest of the platypus is formed at the end of a burrow, which is reached by two openings—one above and the other below the surface of the water.

The native porcupines, or ant-eaters, are also egg-laying, but differ from the platypus in that the females carry their two eggs in a pouch, where they are hatched by the warmth of the body. The common species (*Tachyglossus aculeatus*) is characterised by having the fur thickly mingled with spines, which sometimes conceal the hair beneath. The muzzle is produced into a long cylindrical beak, which during no period is known to possess teeth; it is admirably adapted to protect and assist the worm-like, extensile tongue. The feet are stout, and furnished with five powerful claws. The tail is short and conical. Several species have been described, but modern zoologists are inclined to consider them as geographical varieties. Regarded thus, the species ranges from south-eastern New Guinea, throughout Australia, to Tasmania. Those which are generically named *Zaglossus* are distinguished by possessing only three toes on each foot, and by having a much-curved beak of great length. The known species are confined to New Guinea.

The marsupials, to which class belongs the great majority of Australian mammals, are distinguished by the young being produced in an extremely imperfect state of development, and nurtured, frequently in an abdominal pouch, for a lengthy period. In bush districts it is a common belief that the young are produced on the teat; this, however, is quite erroneous, for they are born in the usual manner, and afterwards applied to the teat by the mother. Australia is the great home of the marsupials; but they also occur in Tasmania and New Guinea, and have overflowed into neighbouring islands. Marsupials are also found in America, where they are represented by two families—the *Didelphyidæ* and *Epanorthidæ*. The habits and conditions assumed by the marsupials are very varied. They are divided into eight families, namely, the *Macropodidæ*, *Phalangeridæ*, and *Phascolomyidæ*, constituting the sub-order of Diprotodonts, so named from the fact that the animals included possess only two front teeth in the lower jaw; and the *Epanorthidae*, *Peramelidae*, *Dasyuridae*, *Notoryctidae*, and *Didelphyidae*, constituting the sub-order of Polyprotodonts, distinguished by having at least traces of six or more such teeth.

1. *Macropodidae.*—This family includes the kangaroos, wallabies, tree kangaroos, and rat kangaroos. The kangaroos are so well known that they do not require more than a passing notice. They vary in size from the great grey kangaroo (*Macropus giganteus*), as large as a man, to the little musk kangaroo (*Hypsiprymnodon moschatus*), which can easily be concealed in the pocket. Their hind limbs are very long, and progression is chiefly effected by hopping, the long tail meanwhile acting as a balancer. The tree kangaroos of Queensland and New Guinea are among the most notable of the family, climbing tall trees, even to the most slender branches. Less frequently observed upon the ground than the others, their limbs are more equal in length.

2. *Phalangeridae.*—Under this name are included the Australian opossums, the flying opossums, the flying mouse (one of the smallest marsupials), and the clumsy native bear—all tolerably well-known forms.

3. *Phascolomyidae.*—The wombats, of which there are three species, are heavily-made, short-limbed animals. They excavate huge burrows in the ground, and feed upon grass and other herbage. They inhabit Australia and Tasmania.

4. *Epanorthidae.*—This family is represented by two rat-like animals, called selvas, from South America. They differ from the typical polyprotodonts by having a pair of horizontal lower incisors, like a kangaroo, behind which are several other pairs of functionless teeth.

5. *Peramelidae.*—The bandicoots, found in Australia and New Guinea, are assigned to three genera—*Thylacomys*, *Perameles*, and *Chœropus*. Members of the first-named are known as rabbit bandicoots, or beilbys; while the second genus includes the true bandicoots, whose form and habits are sufficiently well known. The pig-footed bandicoot (*Chœropus ecaudatus*) is generically separated on account of the unique and peculiar structure of the feet, which have a striking resemblance to those of the pig.

6. *Dasyuridae.*—The animals included in this family are the marsupial carnivora, so to speak, and are familiar as native cats (*Dasyurus*) and pouched mice (*Phascogale* and *Sminthopsis*). These forms occur in Tasmania, New Guinea, and adjacent islands, as well as in Australia. The most formidable of the group are the Tasmanian tiger or wolf (*Thylacinus cynocephalus*) and the Tasmanian devil (*Sarcophilus satanicus*), which are confined at the present day to the State indicated.

7. *Notoryctidae.*—The marsupial mole is in no way connected with the European mole; but, nevertheless, has acquired many similar habits—affording a valuable lesson in parallelism in development. It is known only from central South Australia.

8. *Didelphyidae.*—These are the true opossums, and being confined to America, need not be further mentioned here.

Dogs and seals form the carnivora of Australia. The dog family (*Canidæ*) is represented by the dingo, or native dog (*Canis dingo*), called by the aboriginals "worregal," dingo being only the aboriginal name for the domestic dog introduced by Europeans. The native dog is found on all parts of the Australian mainland, and will inbreed with the domestic dog, crosses being common throughout the settlements. It is questionable whether the dingo is indigenous, or whether it has been introduced from abroad. It was undoubtedly acclimatised before the arrival of the first white settlers. The dingo does not bark, its temper is intractable, and it works great havoc among the flocks of the settlers.

The *Rodentia* find representatives in many species of native rats, the more typical of which belong to the genus *Mus*, and the Jerboa-like forms to the genus *Conilurus*. The familiar water rat is known as *Hydromys chrysogaster*.

The *Chiroptera* are well in evidence, and include the flying-foxes and many insectivorous bats. The common flying-fox (*Pteropus poliocephalus*) is met with in the brush lands; but it haunts the settlements during the fruit season, making great depredations among the orchards and gardens.

Of seals (*Pinnipedia*), the species found off the coast of New South Wales is the Australian sea bear, or eared seal (*Otaria forsteri*), which is a sociable species, seldom found far from its rocky haunts. The sea leopard (*Ogmorhinus leptonyx*) is a solitary species, and is sometimes taken off the coast or stranded on the shore.

Among other mammals belonging to New South Wales, or found contiguous to its coasts, are representatives of the orders *Cetacea* and *Sirenia*, the first comprising whales, porpoises, and dolphins; and the second, manatees and dugongs. Whales have always haunted the coasts of the State, and formerly a brisk trade was carried on in oil and whalebone, Twofold Bay, about 208 miles south of Sydney, being the chief seat of the industry. Among the whalebone whales which inhabit our waters may be mentioned the Southern right whale (*Balæna australis*), the pigmy whale (*Neobalæna marginata*), and the Sulphur-bottom (*Balænoptera huttoni*); while of sperm whales there are the gigantic *Physeter macrocephalus*, *Mesoplodon layardi*, and *Kogia breviceps*. The dolphin of our waters, commonly called "porpoise," is not distinguishable from the common and cosmopolitan form, *Delphinus delphis*. The order *Sirenia* is represented by the dugong (*Halicore dugong*); but it is now seldom seen south of Moreton Bay. Its flesh is highly valued by the natives, and its oil is a good substitute for cod-liver oil.

Besides those already mentioned, geological research has brought to light the remains of numerous extinct species of gigantic mammalia. The largest fossil marsupial, the *Diprotodon australis*, an herbivorous monster, was as large as the rhinoceros, and related to the native bear or the wombat. Its bones have been found distributed generally throughout eastern and southern Australia. Fossil remains of another large marsupial, the *Nototherium*, named by the late W. S. Macleay the *Zygomaturus*, have also been found, as well as of a member of the family of the *Phascolomyidæ*, or wombats, and of a marsupial rodent-like animal, named the *Sceparnodon*. In the bone-breccia of the Wellington Valley Caves were found the bones of gigantic kangaroos (*Macropus titan*), which have been placed in the genera *Palorchestes*, *Procoptodon*, *Protemnodon*, and *Sthenurus;* besides those of the *Thylacoleo carnifex* and the true *Thylacinus*. The Wellington Valley Caves have also yielded fossil remains of a "porcupine" (*Tachyglossus*) and a platypus (*Ornithorhynchus*), belonging to the order Monotremata.

REPTILES AND BATRACHIANS.

Visitors, or new comers, are often much alarmed when told that there are a hundred different kinds of snakes in Australia, and their anxiety is increased when informed that the venomous are twice as numerous as the innocuous ones. There is also an impression that snakes will attack and follow a man much as some wild beast might. The saying, "Let a bee be and he'll let you be," applies equally to a snake. The proportion of snakes found within a radius comprising many miles is relatively small, and of the venomous ones very few are harmful to man. The recognisable dangerous species may be narrowed down to five, and these are what I call the deadly snakes: they will be dealt with first.

The black snake (*Pseudechis porphyriacus*) is our best-known species, and is partial to the neighbourhood of water, being very common in some of the undisturbed watercourses. It attains a length of 6½ feet, and may be immediately known by its characteristic colouration. The entire back is a shining black, the underside a beautiful red, each plate being edged with black; the large scales bordering the belly-plates are red, tipped with black, and the underside of the tail is also black. This snake rapidly moves off on the approach of man, and if "cornered" never bites until it is certain of its object.

The superb snake (*Denisonia superba*) is also known as the copper-headed snake, and in Tasmania as the diamond snake, which is unfortunate, considering that the continental snake of that name is harmless. The superb snake is a southern form, not ranging further north than New South Wales, and commoner on the highlands than elsewhere. In colour it is brown or olive above and yellowish beneath, the scales bordering the belly-plates being yellow or red. In Tasmania this species may attain a length of 6 feet, but Australian examples are smaller.

The brown snake (*Demansia textilis*) has an extensive distribution in Australia, and is usually of varying shades of brown above and yellowish or greyish beneath. Its colour differs, however, under varying conditions of season or locality, sometimes inclining to red, sometimes to grey. All have the belly scales blotched with a darker tint, and this may be regarded as characteristic of the brown snake at all ages. This feature will distinguish the young from those of the tiger snake, both of which may be similarly banded. The brown snake is the only deadly species mentioned which lays eggs; all the others produce living young. If unable to escape, this snake will bite wildly, and will even waste its energy and poison upon a stick: it is thus less dangerous than those which reserve their venom for a certain stroke.

The tiger snake (*Notechis scutatus*) is also known as the brown-banded snake, and in Tasmania, again unfortunately, as the carpet snake. It is one of the most dangerous, and certainly our most vicious species, showing fight where others retreat. The colouration is variable, generally of a lighter or darker brown crossed with about fifty darker rings; the under parts are bright yellow, becoming greyer towards the tail. The tiger snake attains a length of 6 feet, and is largely distributed over Australia and Tasmania.

The death adder (*Acanthophis antarctica*) is our smallest deadly species, seldom being found longer than 2½ feet. It is a short, thick, and repellent-looking reptile, and is of very sluggish habit, this feature making it dangerous. Instead of moving rapidly away, it lies motionless until trodden upon, when its venomous stroke is rendered with lightning rapidity. Its colouration also is a source of danger, for it harmonises well with its surroundings. The colour varies from a dirty grey, through various shades of brown to reddish hue, and the body is crossed with from forty to fifty darker rings. The belly-plates are grey or pink, clouded with deeper tints. The tail terminates in a thorn, often erroneously regarded as a "sting."

Other deadly species exist, but as only a trained zoologist could distinguish them from one or other of those mentioned, no useful purpose could be here served by enumerating them.

By far the largest proportion of Australian snakes may be classed as venomous, but not deadly, as regards man; only a few of the most familiar forms can be mentioned here. The ringed snake, or bandabanda (*Furina occipitalis*) is one of the best known, and is quite unmistakable, being ringed with black and white alternately. It reaches a length of 30 inches, and is found throughout the continent. The red-naped snake (*Pseudelaps diadema*) derives both common and scientific names from the ruby-like spot on the neck. The whip snake (*Demansia psammophis*) reaches a length of 4 feet, and may be recognised by the ring of yellow round the eye, which colour is continued backward into a point above the mouth. The broad-headed snake (*Oplocephalus bungaroides*) is confined to New South Wales, and is often mistaken for a young diamond snake. This species attains a length of 4 feet, and its bite, though not deadly, may produce rather alarming symptoms. A near relative, the banded snake (*Oplocephalus stephensii*), is also peculiar to this State, and both are more or less arboreal in habit. The latter species is fully adult at 2½ feet, and is strikingly banded in two colours, black and yellow.

Of six water snakes occurring in Australia, four are venomous. These, and one innocuous one, are found only in the northern rivers. The harmless one (*Tropidonotus picturatus*) of this State is distinguished by having the scales keeled instead of smooth. It reaches a length of 3 feet.

The terrestrial harmless species may be briefly noticed. The best known are the diamond and carpet snakes (*Python spilotes*). The former attains a length of 10 feet, and receives its name from the yellow diamond-shaped marks which adorn its black body, each scale of which bears a yellow dot. The under parts are yellow with black markings. Whereas the diamond snake is found only in a limited area on the east coast, the carpet snake is known from nearly all parts of Australia: it reaches a length of 10 feet or more. The markings are very beautiful, and are felicitously expressed by the common name of the snake. Whereas the pythons, just described, are stout of build, the green tree snake (*Dendrophis punctulatus*) is quite slender; it reaches a length of 7 feet, and glides among the branches of trees with great celerity. The plates of the belly are specially adapted for arboreal life, and the colour is green, so that it may well escape detection among the foliage.

The blind snakes (*Typhlopidæ*), of which about twenty species occur in Australia, live underground, and are frequently mistaken for worms. They feed largely upon white ants and their eggs, and are thus beneficent reptiles.

All the marine snakes are venomous, but deaths reported from their bite are very rare. They are common in tropical waters, but are little known on our coast. They may be at once recognised by their flattened eel-like tail, and nearly all are helpless on land.

Turning to the lizards, it may be comforting to learn that none of the Australian species are venomous. The geckos have an evil, though undeserved, reputation, and are the least capable of inflicting harm if they desired to do so. Rock scorpion is a name applied to one of our commonest geckos (*Gymnodactylus platurus*), remarkable for its broadened leaf-like tail. Many of the geckos are called adders, the very name being calculated to inspire fear, thus we have "wood adder," applied to *Gehyra variegata*, "stone adder" to *Diplodactylus vittatus*, "pine adder" to *Diplodactylus spinigerus*, etc. Geckos have the power of climbing smooth surfaces, the cubuck (*Œdura robusta*) frequently hiding behind the wall-maps in schools.

The family *Pygopodidæ* is peculiar to the Australian region, and its members are, for the most part, very snake-like. The limbs are reduced to a single pair, and are so closely pressed to the body as to be overlooked unless sought for. These lizards have the faculty, in common with geckos and scinks, of throwing off a portion of, or the whole of, their tails when alarmed. The wriggling tail is pounced upon by a bird or other enemy, and the lizard escapes to grow another member, which process may be repeated as often as necessary. Though dismemberment may be practised at will, my experience inclines me to believe that sudden fright will produce the effect involuntarily.

Long legs, flattened heads, and broad bodies are usually attributes of the *Agamidæ*, of which the jew lizard (*Amphibolurus barbatus*) and spiny lizard (*A. muricatus*) are well-known representatives. These lizards have long tails, and, when much alarmed and hard pressed, some of them raise their bodies from the ground and run upon their hind legs alone. The water lizards (*Physignathus*), the frilled lizard (*Chlamydosaurus kingii*) of Queensland, and the thorny devil (*Moloch horridus*), belong to the *Agamidæ*.

The goanas (*Varanidæ*), a word corrected (*sic*) by superior people to "iguanas," are also known as lace lizards, at least in books; they are the largest Australian lizards, and differ from the iguanas by the characters of the skull and teeth. The latter reptiles, with one exception, are confined to the new world, and have little in common with the Australian, Indian, and African forms.

The majority of lizards met with in New South Wales belong to the family *Scincidæ*, which includes many forms of widely different aspect. The blue-tongued lizard (*Tiliqua*) produces living young; most others lay eggs. The shingle-back (*Trachysaurus*) derives its name from the thick scales which give it a very rough and uninviting appearance, and in marked contrast to the beautiful scinks of the genus *Lygosoma*, whose smooth polished scales and rapid movements render them more tolerated than any other reptile.

Tortoises are poorly represented, and are semi-aquatic; the long-necked tortoise (*Chelodina longicollis*) and *Emydura macquaria* are the best known. Marine turtles very seldom visit our shores.

In Australia we miss the tailed batrachians (the newts and salamanders). The frogs and toads are members of one of the three families—*Leptodactylidæ*, *Bufonidæ*, or *Hylidæ*. Of the first family the best known are the swamp frogs, of the genus *Limnodynastes*, and the little *Crinia*, frequently found under stones. Of the *Bufonidæ*, or toads, there is the beautiful Catholic frog (*Notaden bennettii*), so called from the cross on its back, and the little *Pseudophryne*, often found with *Crinia*. The great bulk of Australian batrachians is made up of the tree frogs (*Hylidæ*), distinguishable by having the tips of the fingers and toes dilated into adhesive discs: the hind feet are webbed for swimming. The two most familiar species are the green frog (*Hyla cærulea*), whose resonant voice is so often heard in the iron tanks and spoutings, and the golden frog (*Hyla aurea*), a sociable species, frequenting the water-holes in thousands.

FISHES.

The herrings, of such economic importance in Europe, and of which we have several species in New South Wales, are scarcely netted. The local pilchard (*Clupea neopilchardus*) may be found in the offing for three or four months annually. As fresh food it would command a ready sale, while as sardines it should be equal to the imported article, and in many cases superior, for sprats are quite commonly tinned as sardines. The sardine of commerce is none other than the young of the European pilchard, a fact not generally known. The maray (*Etrumeus jacksoniensis*) is another herring which should prove valuable. The big-eyed herring (*Megalops cyprinoides*) is not uncommon in the markets, but the delicious sprats of various genera, and the anchovy (*Eugraulis antipodum*), are seldom to be obtained, though at times they teem off the coast. The fresh-water herring (*Potamolosa novæ—hollandiæ*) affords rapid sport with the fly, and makes a delicious breakfast dish.

The catfishes (*Siluridæ*) claim but little attention, the fresh-water species (*Copidoglanis tandanus*) and the estuary catfish (*Cnidoglanis megastomus*) are the ones usually taken, but, partly owing to prejudice, are not in great favour. Australian seas minister well to the palate of those who like eels. The conger (*Leptocephalus labiatus*), although of small size, is very tasty. The commonest species is the green eel (*Gymnothorax prasina*) well known to the rock fishers as an impudent and dangerous denizen. Our rivers furnish excellent species in *Anguilla bengalensis* and *A. australis*.

The native trout (*Galaxias*) abound in all our streams and permanent ditches, and the Australian grayling (*Prototroctes marœna*) seems to be extending its range northward into our territory. The Sergeant Baker (*Aulopus purpurissatus*) is the only member of the *Myctophidæ* at present obtainable, but the cucumber fish (*Chlorophthalmus nigripinnis*) would be added to our menu if the trawl were used. The flute mouths (*Fistulariidæ*), bellows fish (*Centricidæ*), pipe fishes, and sea horses (*Syngnathidæ*), though extremely interesting for their quaint forms and odd habits, are of no economic value. The family *Scombresocidæ* includes the long-toms (*Tylosurus*), the garfishes (*Hyporhamphus*), among the commonest and most esteemed fishes of our coast, and the flying-fishes (*Exocœtus*), etc. Leaving the *Atherinidæ*, one member of which only is used as food, we pass to the *Mugilidæ*, a family yielding many species, the sea-mullet (*Mugil dobula*) being one of the commonest market fishes. With the mere mention of the pikes (*Sphyrœna*) and a few fishes of the true cod-fish family (*Gadidæ*) we notice the nannygai (*Beryx affinis*), a choice, though never plentiful fish, remarkable for its brilliant red colour. The black fish and the ludrick (*Kyphosidæ*) are commonly caught off the rocks; they are vegetable feeders, and require to be eaten soon after capture to be favoured as food. The *Serranidæ* provides many valuable food fishes, both marine and fresh water. The perch (*Percalates colonorum*), the Murray Cod (*Oligorus macquariensis*), *black rock cod* (Epinephelus *dœmeli*), golden perch (*Plectroplites ambiguus*), and Macquarie Perch (*Macquaria australasica*) are the best known species. The Murray Cod reaches a weight of a hundred pounds. The fish sometimes mentioned under this name as attaining to thrice that weight is referable to the Queensland cod (*Promicrops itaiara*). Another common member of the family is the wirrah, also known as old boot (*Acanthistius serratus*), but it is not much esteemed. Four species of so-called whiting occur, the sand whiting (*Sillago ciliata*) being the best known. The jew-fish, teraglin, and salmon, members of the *Sciœnidæ*, are all moderate table fishes, as are also some of the *Latrididæ* and *Aplodactylidæ*, which include the carp, morwong, and jackass fish. Of all Australian fishes, the snapper (*Pagrosomus auratus*) is without doubt the best known and most prized, not only for its edible properties, but also as a sporting fish. The black bream, or darky (*Chrysophrys australis*), is a similar favourite with the "lone fisherman." The red mullets (*Mullidae*), though well flavoured, are not given the high place which the Romans of old, and to-day, accord their European allies. The parrot fishes yield a fair proportion of table representatives, chief among which may be named the pig-fishes (*Diastodon*), the gropers (*Chœrops and Achœrodus*), and several members of the genus *Pseudolabrus*, etc.

Among the scombroid fishes may be mentioned the king and samson fishes (*Seriola*), large and powerful marine forms, the blue and the white trevallies (*Caranx*), and the yellow-tail (*Trachurus declivis*), chiefly caught for bait. The tailor (*Pomatomus saltatrix*), mackerel (*Scomber colias*), horse mackerel (*Sarda chilensis*), and barracouta (*Thyrsitesatun*) are other well-known fishes.

The trawl would secure the John Dory (*Zeus australis*) in some numbers, but at present this choice fish is seldom seen. The flat fishes are well represented, but, with a few exceptions, the supply is largely drawn from New Zealand and southern waters. The red rock-cod (*Scorpæna cardinalis*) and its allies find a ready sale, as do also the flat-heads (*Platycephalidæ*) and gurnards (*Triglidæ*). The fish fauna of the State is a very rich one, and, including sharks and rays, numbers over 500 species.

BIRDS.

(*By A. J. North, Ornithologist, Australian Museum, Sydney.*)

Few countries can boast of a greater variety of beautiful birds than New South Wales, all the more important orders and families of the class Aves being represented in the fauna of the State. On the Australian continent and the adjacent islands about 800 species of birds have been discovered, some of which are especially interesting, and among these may be mentioned the Lyre-bird (*Menura superba*), the Satin Bower-bird (*Ptilonorhynchus violaceus*), the Fawn-breasted Bower-bird (*Chlamydodera cerviniventris*), and the Tooth-billed Bower-bird (*Scenopœtes dentirostris*); the Mallee-fowl or Mallee-bird (*Lipoa ocellata*), the Mound-building Brush-fowl (*Talegallus Lathami*), and the Collared Plain-wanderer (*Pedionomus torquatus*). Many of the Australian birds, besides being beautifully plumaged, are no mean songsters, and others again are possessed of remarkable powers of mimicry and ventriloquism.

The order Accipitres is well represented in New South Wales, twenty-six out of the twenty-eight species inhabiting Australia being found in the State. The largest of all our birds of prey is the Wedge-tailed Eagle (*Aquila audax*). In many parts of the State this fine bird is included in the list of noxious animals and birds, in consequence of the destruction which it causes amongst lambs, but in the dingo and rabbit infested districts it is protected by land-owners on account of the effectual service which it renders in keeping these pests in check. Another useful bird is the Black-breasted Kite (*Gypoictinia melanosternon*), frequenting the inland districts. As many as thirty rabbit skulls have been found under a nest of a pair of these birds containing young. The White-bellied Sea Eagle (*Haliætus leucogaster*) and the White-headed Osprey (*Pandion leucocephalus*) frequent the bays and inlets of the coast, while several species of hawks, eagles, harriers, kites, and a kestrel are found inland. The order Striges, or nocturnal birds of prey, is represented by eight species. Chief among these are the Great Owl of the brushes (*Athene strenua*) and the Sooty Owl (*Strix tenebricosa*), found in the coastal districts.

The order Psittaci is especially well represented, and includes many beautiful species of cockatoos, parrots, parrakeets, and lorikeets. Among the larger species are the White and Black Cockatoos, yellow and red crested; and the Rose-breasted Galah. The sub-family *Platycercinæ* is also especially strong, some of the most notable members being Bourke's Rose-hill, and Barnard's Parrakeets, the Ground Parrakeet, and many other species all gorgeously plumaged.

The order Picariæ, which embraces swifts, kingfishers, cuckoos, &c., includes one very remarkable species, viz., the Great Kingfisher, "Kookooburra," or Laughing-jackass, so called from its extraordinary mocking laugh. It is one of the most valuable of birds, being the determined enemy and persistent destroyer of small reptiles, although it occasionalpounces upon chickens and small birds. The Tawny-shouldered Podargus (*Podargus strigoides*) is also a characteristic member of this order, which includes the Owlet Night-jar, and the Dollar-bird.

The Passeres is the largest order of birds in Australia; and the finest, if not the most beautiful, family is the *Menuridæ*. New South Wales possesses all three species of this remarkable Australian genus. They are to be found chiefly in the fern gullies and brush forests of the State. To the order Passeres belong also the crow-shrikes of the genera *Cracticus* and *Gymnorhina*, the beautifully-plumaged Regent Bower-birds (*Sericulus melinus*), Whip Birds (*Psophodes crepitans*), Swallows, Martins, Diamond Birds, Fly-catchers, Fan-tails, Wedge-bills, Thick-heads, Robins—red-capped, red-breasted, and yellow; "Superb Warblers," Emu-wrens, Meadow Pipits, Bristle-birds; Finches; Pittas, Ground-thrushes, Bower-builders, Cat-birds, Rock-warblers, and Honey-eaters (*Meliphagidæ*). Worthy of special notice in this large order of birds are the Bower-builders. Three species of these extraordinary and interesting birds are found in this State. The brilliantly-plumaged Regent Bower-bird (*Sericulus melinus*), which forms the most primitive bower or playing-place, frequents the dense coastal brushes of the northern rivers; the Satin Bower-bird (*Ptilonorhynchus violaceus*) is found in the scrubs and mountain ranges of eastern New South Wales; and the Spotted Bower-bird (*Chlamydodera maculata*) inhabits the grassy plains and lightly-timbered country inland. Scattered about the entrances to the bowers of the last two species are pieces of bleached bone, land shells, bright feathers, bits of looking-glass, coins, or any bright object which the birds may pick up in the bush.

The order Columbæ is largely represented in the State, especially in the great primeval forests of the coast districts. In the cedar brushes of the Liverpool Range the White-headed Fruit Pigeon may be found; and in the brush forests of the Clarence, the Richmond, the Macleay, and Illawarra, the Top-knot and Large-tailed Pigeons, and the Wonga-wonga (*Leucosarcia picata*), so prized for its large size and the whiteness and delicacy of its flesh, are very plentiful. The Bronze-winged Pigeon (*Phaps chalcoptera*) is common to almost all parts of the State. Several species of these birds are remarkable for their beautiful plumage, their size, and the excellence of their flesh. One of the finest species, the Partridge Bronze-winged Pigeon (*Geophaps scripta*), is found almost exclusively in the plains of the interior. Doves are also numerous, and most of the species are extremely delicately-coloured and beautiful. The little turtle-dove of the inland districts (*Geopelia cuneata*) is the smallest species of this order.

The game birds found in the State belong to the orders Gallinæ and Hemipodii. The former is represented by the Wattled Talegallus (*Talegallus Lathami*), found in the northern coastal scrubs and contiguous mountain ranges, and the Mallee-fowl (*Lipoa ocellata*), inhabiting the inland districts. Both of these birds belong to the family *Megapodidæ*; they are mound-raising birds, and deposit their eggs in a scraped-up heap of leaves, decaying vegetable matter and sand. To this order also belong the Stubble Quail (*Coturnix pectoralis*), the Swamp Quail (*Synoicus australis*), and the King Quail (*Excalfatoria lineata*), the last-named species being probably the smallest game bird in the world. The order Hemipodii, which by some authorities is included in the Gallinæ, is represented by four species of Turnix, commonly known as quail, and the remarkable Collared Plain Wanderer (*Pedionomus torquatus*).

To the order Alectorides belong the well-known Australian Crane or "Native Companion," and the Australian Bustard, or Plain Turkey, the latter being much prized as an article of food.

Among others, the order Steganopodes is represented by the Pelican, Gannet, and different species of Cormorants. The order Herodiones includes the White Heron, Pacific Heron, and White-fronted Heron, Egrets, Ibises, and Spoonbills. In Anseres are found the Black Swan, Maned Goose, and many species of ducks. The order Fulicariæ is represented by the well-known Pectoral Rail, several species of Crake, the Australian Coot, and the *Porphyrio*, or "Red-bill." The large order Limicolæ includes the Oyster-catcher, different species of Plovers, Dotterels, Curlews, Sandpipers, Painted Snipe, and Latham's Snipe, the latter being a migrant from Japan, and eagerly sought after by sportsmen. To the order Gaviæ belong many species of Tern frequenting our coasts, and the Silver Gull and Pacific Gull common at times in Sydney Harbour. The order Tubinares is represented by several species of Petrels, Prions, and Albatroses, and the order Pygopodes by three species of Grebe. The order Casuarii is represented by the Emu (*Dromaius novæ-hollandiæ*), the largest bird in this part of the globe, and one, unfortunately, rapidly being exterminated.

Besides the birds mentioned above, there are others of perhaps less note, but numerous, and frequently very beautiful.

MOLLUSCA.

(*By C. Hedley, Conchologist, Australian Museum, Sydney.*)

The first of local shell-fish in economic interest is the oyster. Two kinds occur on the coast of New South Wales—a large one, considered to be a form of the English oyster (*Ostrea edulis*), and popularly known as the mud oyster; and a smaller sort, the rock oyster (*O. glomerata*).

The mud oyster reaches Sydney, the northern limit of its range, but fails to attain here to the luxuriant growth which it exhibits in cooler climates. The prolific beds of Stewart's Island, New Zealand, furnish a large proportion of the supply of mud oysters for the Australian markets. This oyster prefers deep and muddy places, where it may attain a length of 8 inches. Nowhere is it now abundant, and, indeed, it seems to be approaching extinction. The blacks formerly feasted upon it, but connoisseurs of the superior race disparage it as large and coarse.

Unlike the mud oyster, the rock oyster is well suited to cultivation. In Southern Queensland, favoured alike by more congenial climate, extensive tracts of shoal and sheltered water, and appropriate legislation, the cultivation of this species has been most successful. The beds in Moreton Bay supply not only the local demand, but also help to meet the requirements of the southern capitals. Though falling short of the perfection reached by the cultivation of the Bay of Biscay and the New York coast, the management of the Queensland oyster-beds excels that of any other Australian fishery. When accurate details of the mode of breeding of the rock oyster shall have been found by exact scientific inquiry, a further impetus will be given to this flourishing industry. At present all that is known is that in its habits the Australian rock oyster differs altogether from the English and American kinds. Incidentally, it may be remarked that the English oyster cannot be consumed in May, June, July, and August, but the Pacific oyster is in season all the year round. Large quantities of oysters are imported into the State every year, and it is evident, therefore, that the local market will afford ample support to the cultivators of the bays and deltas of northern New South Wales. The obstacles to success are floods and shifting sandbanks, and the depredations of boring worms and whelks; while among the advantages of this lucrative occupation are the quickness of returns and the smallness of capital required.

Quantities of spat are thrown off at various times, but especially heavy falls occur in the spring, after which the rocks between tide-marks may be literally plastered with young shells of the size of a shilling. The great majority of these perish; those surviving reach maturity in about twelve months, and probably increase in size for two or three years. When adult, their length is about 3 inches. Typically, they have sharply-waved, black-purple edges. Form and colour, however, are so altered by environment that specimens from different situations have been given different names. That they are really one kind is, however, proved by taking a young purple and crumple-edged shell from a position on rocks washed by waves, and placing it on a zostera flat in calm water. Here it develops a thin, white, smooth and large shell; so that one shell may show one form at one end and another at the other, the line of junction marking the period of transference.

No shell-fish other than oysters are regularly consumed in New South Wales, the Australian inheriting and accentuating the British distaste for such small game. Occasionally, however, there are exposed for sale at the Sydney fish-market the Whelk (*Potamides ebeninum*) and the Cockle (*Arca trapezia*) the former being cooked, and the latter eaten either cooked or raw. Both the Whelk and the Cockle are used as bait, but neither is at all like its English namesake. Probably their use as food is restricted to the Greek and Italian element of the Sydney population. The Mutton Fish, or "Abalone" of Californian markets (*Haliotis naevosa*), is consumed by the Chinese, who, it is said, also collect it for export; but the ordinary citizen is unacquainted with it. The "Ugarie," commonly miscalled by Sydney anglers by the Maori name of "Pipi" (*Donax deltoides*), is frequently used for bait, rarely for food. As an article of diet, various Squid (*Sepia cultrata*, *S. mestus*, &c.) are left to the foreign and coloured of the local seafaring population, but as bait their good qualities are better appreciated. The beaches of New South Wales are not rich in ornamental shells, but the exquisite and rare "King-cockle" (*Trigonia Lamarckii*) from Sydney Harbour is a valued gem, and, as a brooch, may often be seen worn.

Of pests in this division of natural history, the local species of ship-worm, the "Cobra" (*Teredo Saulii*), has wrought great damage amongst shipping, wharves, and piers. It is a far larger and more destructive species than any occurring in European waters. In gardens, the common European Snail, the "Limaçon" dear to the French epicure (*Helix aspersa*), has now obtained a firm footing, and ravages flowers and vegetables alike.

INSECTA AND ARACHNIDA.

(*By W. J. Rainbow, F.L.S., F.E.S., Entomologist, Australian Museum, Sydney.*)

This branch of our native fauna is so vast, that it is not possible, within the compass of a short article, to do it even approximate justice. Perhaps, one of the most interesting features in connection with Australian insect life is the fact that quite a number of endemic forest forms have become pests in our gardens and orchards, and so are more or less familiar to all. To the cultivator, on the one hand, who has to rely upon his crops as a means of bread-winning, this is at times most serious, whilst to the amateur gardener, it is not infrequently a cause of much vexation and disappointment. Almost every order of the Insecta has contributed to this army of depredators. Beetles (*Coleoptera*), White Ants (*Termitidæ*), Butterflies (*Rhopalocera*), Moths (*Heterocera*), Plant Bugs (*Hemiptera*), and Scale Insects (*Coccidæ*), include some of the chief offenders. In addition to these, some insects have been added to our fauna by the agency of commerce, and these, finding themselves in a genial climate, with plenty of suitable food, and for a time, at any rate, free—or almost so—from natural enemies, have become not only acclimatised, but permanently established.

Taking our insect fauna, therefore, as it stands, it is exceedingly rich, but nowhere within the State is it so profuse and varied as in the more tropical jungles of our northern river districts. Here, Coleopterist and Lepidopterist will find, throughout the greater part of the year, many insects that are as charming to the eye as they are interesting from a life-history point of view. This is only natural where vegetation is so varied and luxuriant.

The beetle tribe (Coleoptera) is one of the most numerous, in point of numbers, of our native fauna. In 1887 Mr. G. Masters completed his catalogue of the Australian species, and there are few enumerated therein that do not occur in New South Wales. This list contained upwards of 7,000 species, but this by no means exhausts the subject, because since that date a vast number of new forms have been recorded and described by quite a small army of workers. Thus, each succeeding year, our knowledge of the fauna is being extended. In the *Geodephaga*, or "Ground Beetles," upwards of a thousand species are known. These are included in two families—the *Cicindelidæ* and *Carabidæ*. The former, known popularly as "Tiger Beetles," are by far the most brilliant, many of the forms being endowed with bright metallic hues. It is the smaller family of the two. The *Carabidæ* are mostly sombre insects, black predominating; a few, however, have brighter liveries. In this family we find great disparity in size; one species, *Hyperion schrœtteri*, often measures 2½ inches in length, whilst some of the pigmies of the family are less than $\frac{1}{16}$ of an inch. The most attractive beetles to the average man or visitor are the *Buprestidæ*, or "Flower Beetles." Some of these insects are large and bulky, some long and narrow, and some very small, the sizes ranging from about 2 inches in length to ⅛ of an inch. This family is popular wherever it occurs, owing to the almost uniform brilliance of its species. But it is not alone the brightness of their liveries which attracts; many of them display, in addition, a charming scheme of elytral ornamentation, and exquisite bodily form. Unquestionably the largest family in the *Coleoptera* is the *Curculionidæ*, or Weevils. This family, as a whole, is very destructive, and some of the species occurring in this State have a world-wide distribution. The commonest of all our forest beetles is the big, clumsy Rutilid (*Anoplognathus viridiæneus*), or "King Beetle," an insect noted for its bright golden livery. This species, and some of its congeners, known vernacularly as "The Prince," "The Washerwoman," and "The Commoner," are frequent upon eucalypts, and these are often defoliated by them. Some graceful forms are also to be met with amongst the *Lucanidæ*, or "Stag-horns," and the *Cerambycidæ*, or "Longicorns."

Amongst the *Rhopalocera*, or Butterflies, some charming insects occur in different parts of the State, and here again, our northern tropical jungle is the home of some exceedingly handsome species, such as the huge and gorgeous "Bird-wing" (*Troides priamus* var. *richmondia*), and several charming *Papilios*. Some of the latter are found in many parts of the State, such as *Papilio sarpedon*, sometimes called the "Wanderer," and, in the northern districts, "Blue Fanny." *P. anactus* and *P. aegius* are each common in some districts, and destructive to the foliage of citrus trees. One of the commonest and hardiest of our butterflies is *Anosia menippe*, the larvæ of which feed upon the cotton weed. This insect is known in Australia as "The Wanderer," but in America, the land of its forebears, "The Monarch." Mr. G. A. Waterhouse, B.Sc., has recently catalogued this group of insects, of which there are, in Australia, about 330 species, most of which occur in New South Wales. Some few moths, owing to their huge size, such as *Leto staceyi* and *Zeuzera boisduvali*, attract attention wherever they occur; but the *Heterocera*, generally, are so soberly tinted (and are, as a rule, nightfliers) that comparatively few are enthusiastic enough to make collections. Still, many of these insects are exceedingly chaste, and all are of more or less economic importance, so that they are bound to be, ere long, more generally studied.

Leaving the insects and coming to the Spider group, which is really the higher of the two from a zoological point of view, we are again confronted with an immense number of animals, some of which are of uncanny appearance, some rather pretty, and some really beautiful; but all immensely interesting. There are quite a number of "Trap-door" spiders (*Aviculariidæ*), whose subterranean tunnels and trap-door lids often excite curiosity. Speaking paradoxically, however, all trap-door spiders do not make trap-door nests, and amongst these is one—*Phlogius crassipes*—which usually takes up its abode either in a fissure in the ground or the decaying trunk of a tree. There is no lid to this spider's nest. It is one of the largest of our trap-door spiders so-called, and is provided with peculiar stridulating organs, with which it makes a singular squeaking noise, hence it is sometimes known as "The Whistling Spider." Arboreal spiders are both common and varied, the forms of some being somewhat eccentric. This eccentricity of form, however, is of advantage to the animal, as it often affords it a large measure of protection. Some of them have their abdomens armed with sharp, strong spines, and are known to naturalists as *Gasteracantha*. Many arboreal spiders construct large orbicular webs, but others make irregular, complicated snares. The venomous spider, *Latrodectus hasselti*, is a beast to be avoided, although it is not quite so bad as painted. This spider is of a bright satiny black, with a prominent deep red longitudinal band running down the middle of the upper surface of the abdomen. Some spiders secure a large measure of protection by mimicking dead leaves, twigs, and the excreta of birds. Finally, there are one or two spiders which deserve a passing notice—the "Flying Spiders" (*Saitis volans* and *S. splendens*). They are each rather small, but atone for this by their brilliancy, being decorated with bright golden, metallic green, coppery, and crimson scales. The chief feature of interest, however, is their "flying" apparatus, which is nothing more or less than a flattened lateral extension of the integument of the abdomen. This, when at rest, is folded round the body of the animal, but when leaping or "flying" is unfolded and extended at right angles from the sides of the abdomen. These spiders are usually found upon bushes. They belong to the family *Salticidæ*.

CRUSTACEA.

(*By Thomas Whitelegge, Senior Zoologist, Australian Museum, Sydney.*)

The crustacean fauna of New South Wales is extremely rich in species, but only about twelve kinds are used as an article of diet. Of these, six are fairly common and highly esteemed as food, and are as follows:—

Common Swimming Crab (*Portunus pelagicus*, Linn.).—This is the commonest crab offered for sale in Sydney. It often attains a weight of 2 or 3 lb., and is always in great demand, finding a ready sale at prices varying from 3d. to 9d. each. The principal supplies are obtained in Port Jackson, and from Botany Bay. The shell or carapace of this species is very broad, and ornamented on the front edge with twenty-four spines. Six of these are situated between the eyes, and nine on each side, the last being much larger than the others.

Swimming Crab (*Charybdis cruciatus*, Herbst.).—This species is not common, although it may be seen exposed for sale in large numbers during some months of the year. It attains to a size slightly exceeding the preceding species. The claws are shorter, stouter, and the spines on the arms large, compressed, and tooth-like. The front edge of the shell is armed with twenty spines—six on each side and eight between the eyes. The colour is "reddish, with yellowish spots and bands, of which the middle one represents a cross."

Mangrove Crab (*Scylla serrata*, Forsk.).—This is the largest and most valuable crab obtained on our coast. Unfortunately, it is not common; still, a fairly large number have been exposed for sale during the last few years. The price ranges from 1s. to 2s. 6d. each. The main supplies are obtained from Botany Bay. In this species the claws are very large the front edge of the shell is armed with twenty-four nearly equal spines, and the back of the shell is convex and smooth. The colour of the Mangrove Crab, when alive, is olive-brown. It inhabits deep holes in the mud, and comes out at low tide to feed.

Sydney Craw-fish (*Palinurus Hügelii*, Heller).—The craw-fish, or lobster (as it is usually called), is very abundant along the whole coastline, but the chief supplies are obtained at Port Stephens. It is by far the largest and most valuable of all the crustaceans of New South Wales, often attaining to 8 or 10 lb. in weight. Between four and five thousand dozen are sold annually in the wholesale markets, at prices varying from 1s. to 20s. per dozen.

A second species is often seen offered for sale—the "Southern Craw-fish" (*Palinurus Lelandii*), which is equal to the Sydney Craw-fish as an article of food, although usually much smaller. It may readily be distinguished by the highly-sculptured segments of the abdomen, and by the numerous hairs surrounding the bases of the spines.

River Cray-fish (*Astacopsis serratus*, Shaw).—The Cray-fish is seldom offered for sale in Sydney, but it was much used as food along the banks of the inland rivers. These crustaceans often attain to a foot or more in length, and are highly prized in the winter season, when they are in their best condition.

Common or Sand Prawn (*Penaeus canaliculatus*, Olivier).—The common Prawn is obtained in large quantities during the greater part of the year, but in midwinter there is, at times, a falling-off in the supply, and prices rise accordingly. In addition to the demand for consumption as food, this prawn is much used as bait, and frequently fetches very high prices in times of scarcity. Large specimens often reach 8 or 9 inches in length. The principal supplies are obtained from Port Jackson, Botany Bay, and Cape Hawke. The species may be recognised by the deep grooves which extend along each side of the beak or rostrum to the hinder margin of the carapace, and by the rostrum, which is armed above with ten or twelve spines and with one below.

Tiger Prawn (*Penaeus monodon*, Fabr.).—The Tiger Prawn is a species which appears to frequent the coast at irregular intervals. Occasionally it is captured in abundance in Port Jackson and Botany Bay. This species may be readily identified by the numerous dark-coloured cross-bands on the body and by the rostrum or beak, which has six or eight teeth above and three or four below.

River Prawn (*Penaeus Macleayi*, Haswell).—The River Prawn is not so large as the two preceding species, seldom exceeding 4 or 5 inches in length. It is, however, very abundant, and appears to be obtainable during the whole of the year. The rostrum of this species has five or six teeth above, but none below—a characteristic which enables it to be easily distinguished from other forms.

THE NATIVE FODDER PLANTS OF NEW SOUTH WALES.

(*By J. H. Maiden, Government Botanist and Director of the Botanic Gardens, Sydney.*)

THE plants eaten by stock embrace a very large number of species, but I will confine myself to notes on those usually eaten, either because they are abundant, or because they readily withstand drought, or because stock are partial to browsing upon them.

A natural classification of native fodder-plants is—

(*a*) Grasses.
(*b*) Salt-bushes.
(*c*) Other fodder-plants.

(*a*) *Grasses.*

It frequently happens that there is a good deal of discrepancy between the statements of different authorities in regard to the value for fodder of the same species of grass. This arises partly from the fact that some species are exceedingly variable in habit, etc., forming varieties which are raised to the rank of species by other authors, and thus it is that the normal species and one of its varieties, though in reality presenting many points of difference, are confused together. Again, some grasses differ much on account of climatic conditions. It sometimes happens that a grass forms succulent and useful fodder in the coast districts of comparatively high rainfall, while it becomes so dry as to be termed "wiry" in less favoured country.

New South Wales can boast of nearly 200 species of grasses, and many of these have varieties more or less marked. The greater number have some value for fodder, but the space at my disposal only permits me to refer to the principal ones.

While first among the fodder-plants are the grasses, chief amongst the grasses is the "Kangaroo Grass" (*Anthistiria ciliata*, Linn.), which the celebrated botanist, Robert Brown, speaks of as "the most valuable grass as well as the most general plant" in Australia. In the drier parts of the State we have two species of *Anthistiria*, also valuable. One (*A. avenacea*, F.v.M.) is sometimes known as "Oat Grass"; the other (*A. membranacea*, Lindl.) is better known by the Queensland names of "Barcoo Grass" and "Landsborough Grass." Then we have grasses sometimes, and not happily, known as "Native Millets." These are *Paspalum*, and they are found in damp situations in the coast districts. *P. distichum*, Linn., is often known as "Water Couch," and it often mats together in cultivated ground. *P. scrobiculatum*, Linn., is better known in India, where it is cultivated for food, under the name of "Koda Millet."

A number of our most useful grasses belong to the genus *Panicum*; in fact, we have no less than thirty of them, all more or less eaten by stock. I shall refer only to a few. *P. decompositum*, R.Br., is often known as "Blue Polly Grass," "Australian Millet," or "Umbrella Grass." Sir Thomas Mitchell, in one of his expeditions into the interior, drew attention to the fact that the aborigines used to harvest this grass for the purpose of the seeds, which they used for food. It is a valuable yielder of fodder. *P. divaricatissimum*, R.Br., "Spider Grass," is a good fodder-grass, and drought-resisting, as is also the closely-allied *P. macractinum*, Benth., "Roly Poly Grass." P. *distachyum*, L., is a valuable grass. *P. flavidum*, Retz.,; *P. Crus-galli*, L., a coarse, bulky, cattle-grass; *P. trachyrhachis*, Benth.; and *P. prolutum*, F.v.M., may also be mentioned.

Eriochloa, of which we have two forms, but hardly two species, is known as "Early Spring Grass," and forms a large amount of succulent nutritious fodder.

Neurachne Mitchelliana, Nees, an interior species, is considered a good winter grass. This is the true "Mulga Grass," found only in the dry country, and chiefly amongst Mulga shrubs (*Acacia aneura*, F.v.M.).

Andropogon sericeus, R.Br., *A. annulatus*, Forsk., *A. pertusus*, Willd., are all known as "Blue Grass," particularly the first, which is the most valuable. It yields enormously during the summer months, and is one of the most esteemed of our pasture grasses. Other species of *Andropogon* are valuable for fodder, but have no local names. The roots of some are aromatic, though not to the extent of some Indian species distilled for perfume ("Grass Oil"). The imported "Blue Grasses" are not closely related to Australian Blue Grasses.

"Weeping Grass," or "Meadow Rice Grass," are names by which *Microlæna stipoides*, R.Br., is known. It is a valuable grass, maintaining a close turf, and standing overstocking well; but it prefers dampish situations, and dies off in dry country.

Two species of *Hierochloa* are found in the extreme south of this State. They are *H. alpina*, Roem. et Schult., and *H. redolens*, R.Br., and are well known because of the delicious odour they emit—that of new-mown hay—owing to the presence of a substance (Coumarin) found also in Tonka Beans. They are valuable for flavouring hay and making it palatable, and are particularly suitable for cold, wet, moory lands.

Stipa, or "Spear Grass."—Under this name are some valuable grasses, which form excellent feed before they seed; afterwards they are known as "Spear Grasses," as the sharp seeds of some of them may work into the nostrils and wool of sheep, often causing their death. *S. aristiglumis*, F.v.M., is one of the species most liked by graziers.

Deyeuxia Forsteri, Kunth., is known as "Toothed Bent Grass." It produces a large quantity of sweet fodder in damp localities, and is valuable for pastures. It is essentially a winter grass, dying out on the approach of summer. It is variable, and widely distributed.

The name *Danthonia penicillata*, F.v.M., is one which includes a number of nutritious grasses, which go under different names according to some botanists. It includes "White-topped Grass" (*D. longifolia*, R.Br.); "Silver Grass" (*D. pallida*, R.Br.), an excellent drought-resisting species, much relished by stock; and *D. racemosa*, R.Br., "Mulga Grass," peculiar to the back country, and so called because it is only found where the Mulga tree (*Acacia aneura*, F.v.M.) grows. It is very nutritious and much esteemed, and drought-resisting, as are most *Danthonias*. *D. robusta*, F.v.M., is the celebrated "Ribbony Grass" of Mount Kosciusko, a very coarse species, but very fattening, and appreciated by stock of all kinds.

Astrebla pectinata, F.v.M., and *A. triticoides*, F.v.M., are known as "Mitchell Grasses." They are specially valuable, partly because of their power of resisting drought, and partly because of the bulky mass of nutritious foliage they produce. They are dry-country grasses.

Cynodon dactylon, Pers., is the well-known "Couch Grass," which is a native of New South Wales, although the impression is common that it is introduced. It is good for pasture, especially when mixed with white clover. It is a troublesome weed in cultivated areas.

The allied genus *Chloris*, which includes the "Star Grasses," comprises several species, of which *C. truncata*, R.Br., is, perhaps, the best known.

Eragrostis, the "Love Grasses."—This genus includes a number of grasses, some of which are very nutritious; but others are wiry, and are avoided by stock.

Such is a very cursory sketch of a group of plants which are of the highest economic importance to New South Wales, since they do much to support the enormous flocks of sheep which testify to the importance of the pastoral industry, and, in the coast districts, provide sustenance to some of the best milking cows in the world.

(b) *Salt-bushes.*

Next in importance to the Grasses come the "Salt-bushes," so called because of their salty taste. They belong to the natural order Salsolaceæ or Chenopodiaceæ, which are synonyms. New South Wales claims ninety-two (eighty species and twelve varieties); many are worthless for forage purposes, but others are so desirable that the value of salt-bush country has passed into a proverb. It should be borne in mind that visiting sheep will refuse to eat certain salt-bushes, while others, accustomed to the food, will eagerly feed on them. Salt-bush forms no exception to the rule that stock must accustom themselves to certain foods before they can either enjoy them or thrive upon them. Salt-bushes occur near the sea-coast, even within reach of the spray, but they are better developed in the saline soils of the interior.

It is, indeed, the presence of salt-bushes that renders large tracts of country in this State capable of occupation, and hence they come into the very front rank of Australian useful plants. There is, however, a sameness about all of them, and also a lack of ornamental character, which has caused many people to refrain from studying them critically. Hence, very few have received distinctive vernacular names. Nevertheless, since this State owes so much to salt-bushes, it is only fit that we should seek to know a little about them, even if we have to make the acquaintance of their somewhat uncouth botanical designations.

The principal genera are *Rhagodia* (eight species), *Chenopodium* (seven species and two varieties), *Atriplex* (nineteen species and one variety), and *Kochia* (fourteen species and one variety).

Bassia enchylaenoides, F.v.M. (of which *Enchylaena tomentosa*, R.Br., is a synonym), is a bushy dwarf shrub, to which Mr. R. N. Peacock has given the name "Barrier Salt-bush," because of one of its localities. Stock are very fond of it; it is very drought-resistant and should be conserved.

Rhagodia parabolica is one of two salt-bushes known as "Old Man Salt-bush"; some say because of its mealy-white appearance, but doubtless because of its comparatively large size. The same idea is conveyed in "Old Man Kangaroo." *R. Billardieri* is one of the coast salt-bushes, forming dense tall masses in almost pure sand, quite close to the ocean. *R. hastata* is a small shrub from the Castlereagh, Bogan, and other western localities. Most salt-bushes can be trimmed into shape with impunity, and hence are suited to topiary work. *R. hastata* has much come into fashion in the Sydney district during the last few years as a hedge plant, and it is very ornamental.

R. linifolia, the "Flax-leaved Rhagodia," is a small useful salt-bush common on ringbarked areas, and supplements the grass food of sheep. Of that and the "Nodding Rhagodia" (*R. nutans*), stock become very fond, although they prefer grass if they have the choice. There is a spineless variety of *R. spinescens*, which is also a western salt-bush, and this is greedily eaten by horses, cattle, and sheep.

I may here point out that it is necessary to distinguish between reports on fodder-plants made in good and bad seasons. In a good season, with our nutritious grasses abundantly available, almost every other fodder-plant is looked upon by stock as less worthy of attention.

Then we come to *Chenopodium*, a genus well developed in Europe. *C. auricomum* is the "Blue Bush," which has a mealy-whiteness or blueness, hence its common name, and often a golden hue, hence its specific name. It is a bulky shrub, 4 feet high, and is found in the western part of the State. It and *C. album* (the "Fat Hen") are often cooked as green vegetables in Australia.

C. nitrariaceum (a connecting link with *Rhagodia*) has not many leaves, and is spiny-looking; but, although somewhat woody, it is one of the best of the western salt-bushes for sheep.

Atriplex is the Natural Order *par excellence* of salt-bushes in Australia in general and New South Wales in particular. Species of *Atriplex* are nearly all valuable. Many do best in dry country. Some grow on the edge of the coastal sands. *A. angulatum*, which includes *A. campanulatum*, is the "Angular-fruited Salt-bush," and is a mealy-white species about 2 feet high. *A. halimoides* is a dwarf salt-bush, in regard to whose value, as indeed, in regard to several salt-bushes, there are differences of opinion; but something depends on the idiosyncrasies of mobs of sheep. Some people speak of it in terms of the highest praise; others condemn it wholly. *A. holocarpa*, an "Annual Salt-bush," is similarly esteemed by some and despised by others.

A. nummularia is a most valuable species, perhaps the most valuable of all salt-bushes. It is commonly known as "Old Man Salt-bush," is a tall, coarse, succulent species, and has been so much appreciated that it has become extinct in some districts. It is a species that has been conserved by many squatters, while a few have cultivated it systematically, and fed it to sheep like lucerne.

A. semibaccata, the "Creeping or Half-berried Salt-bush," is undoubtedly a valuable species. It seems to be the best all-round salt-bush for the driest and most alkaline lands, because of its procumbent habit. One plant spreads over a large area of land, forming a dense mat. *A. stipitata*, the "Kidney-fruited Salt-bush," is considered a good kind amongst dwarf salt-bushes for pastoral purposes. *A. velutinella* is also good, while *A. vesicaria*, the "Bladder Salt-bush," is a valuable species, growing on the open plains, and apparently spoken well of by all sheepmen. Some people look upon it as the best of the dwarf salt-bushes. Fortunately we have several "best" salt-bushes.

We now come to the *Kochias*, a woolly lot of salt-bushes, often with but little foliage; and, although inferior to many others, yet really valuable. The "Cotton-bush" (*K. aphylla*) is, perhaps, the best known, for it is very drought-resistant and nutritious in spite of its texture. *K. brevifolia*, the "Short-leaved Kochia," is also much esteemed. *K. eriantha*, the "Woolly-fruited Salt-bush," *K. lanosa*, the "Cottony Kochia," *K. pyramidata*, the "Blue Bush" or "Grey Bush," and *K. sedifolia*, another "Blue Bush," the prettiest of all Kochias, and well worthy of a place in gardens, and *K. villosa*, another "Cotton-bush," are all valuable pasture plants belonging to the drier parts of the State, and tolerant of a good deal of saline matter in the soil.

(c) *Other Fodder-plants.*

A further subdivision of this class might be made into herbs, shrubs, and trees, in any complete list.

Amongst herbaceous fodder-plants, *Calandrinia balonnensis*, F.v.M., and other Calandrinias, small, spreading, fleshy plants, belonging to the

Portulaca family, are in the very front rank of useful fodder-plants in the dry interior. If accessible, they are so greedily eaten by cattle and sheep that they have no chance to spread. A very important merit lies in the fact that they are both meat and drink to hungry stock, and thus their presence renders it possible for small and large stock to cross stretches of waterless country. They are known by the aboriginal name of "Periculia."

Erodium cygnorum, or the blue-flowered Crowfoot, is a member of the Geranium family, and is greedily eaten by stock.

The Acacias or Wattles will at once be called to mind, as they are important fodder-plants in the dry interior. Amongst the principal I may mention the Mulga (*A. aneura*, F.v.M.), the Currawang (*A. doratoxylon*, A. Cunn.), the Weeping or True Myall (*A. pendula*, A. Cunn.), the Cooba or Willow (*A. salicina*, Lindl.), while most of the others, except the very prickly ones, have served as food for stock, particularly when grass is scarce. Sheep have been fed for over a year on Mulga, and yet have produced fair wool. In many runs in the drier parts of the State, these and other edible shrubs have a hard struggle for existence, and are much scarcer than formerly, on account of sheep and cattle having eaten down the seedling plants. Amongst other plants belonging to the same Natural Order as the Acacias we have some *Cassias* (yellow-flowered plants allied to the Senna-plant), which are browsed upon, and a sweet-scented yellow-flowered Native Clover found out west, and whose botanical name is *Trigonella suavissima*, Lindl.

It is worthy of note that some ornamental shrubs (*Daviesia*) are much esteemed by horses on account of the bitter taste of their leaves, and are known as "Hop-bushes" on that account. They are not, however, to be confused with other shrubs which bear the name of Hop-bush (*Dodonœa*). These are so named because of their bunches of fruits resembling hops in appearance; they are also slightly bitter, and are eaten by stock.

A useful fodder-plant is the almost leafless Warrior-bush (*Apophyllum anomalum*, F.v.M.). It is allied to the sauce Caper. Two closely-allied plants now claim our attention—one of the so-called Willows, the ornamental *Pittosporum phillyrœoides*, DC., which bears a profusion of small yellow flowers, and the Box-thorn, *Bursaria spinosa*, with white flowers and thorns.

The Mallow order (*Malvaceœ*) includes a number of mucilaginous plants, the tops of which are eaten by cattle, but the stems are very fibrous. We may mention Paddy Lucerne (*Sida rhombifolia*, Linn.), a pest in cooler districts, and rapidly spreading in the warmer and moister parts of the State, where it is a valuable fodder; the Green Kurrajong (*Hibiscus heterophyllus*, Vent.); a Native Cotton (*Gossypium Sturtii*, F.v.M.) of the western country; and the well-known Kurrajong (*Sterculia diversifolia*, G. Don) which is a close relation of the foregoing plants. So important is this tree and the Quandong, that both are exempted from the operations of all timber licenses and permits in New South Wales, and cutting them down is prohibited; in time of drought, however, if the leaves of the Kurrajong are required for feed for stock, the lighter branches may be lopped.

The Wilga (*Geijera parviflora*, Lindl.) is a useful sheep bush or small tree. It has great drought-resisting powers, and is of a very ornamental nature. The Spotted or Leopard Tree (*Flindersia maculosa*, F.v.M.), a tree with spotted bark, and allied to the Red Cedar, is also a useful fodder tree; so also are the "Cattle-bush" or "White-wood" (*Atalaya hemiglauca*, F.v.M.) and *Heterodendron oleœfolium*, Desf., one of the trees called Berrigan. The lattter two are closely allied to the Hop-bush (*Dodonœa*), of which we have already spoken.

Some of the Apple-trees (*Angophora*), and of the closely-allied gum-trees, *e.g.*, *Eucalyptus Gunnii*, Hook. f., the Cider Gum, and the thickish-leaved *Eucalyptus coriacea*, A. Cunn., called Cabbage or White Gum, are occasionally used for cattle-feed when grass is scarce.

We have a Native Carrot (*Daucus brachiatus*, Sieb.) very closely related to the well-known vegetable. It is astringent, but could, doubtless, be much improved by cultivation. To watch a flock of sheep feeding on carrot-ground, where there is not a vestige of anything green, would astonish a stranger. A sheep will smell out a root and scrape away with its hoof until it can grasp the top with its teeth, and draw it out.

The leaves of the Dogwood (*Myoporum platycarpum*, R.Br.) are eaten by both sheep and cattle; so, also, are the closely-allied highly-ornamental "Native Fuchsias" of the western dry country. Their botanical name is *Eremophila*, and they sometimes go under the names of "Emu-bush" and "Berrigan." The Sandalwood is an *Eremophila* (*E. Mitchelli*, Benth.), and so valuable is it as a fodder-plant that it is not permitted to fell it within 5 miles of the Darling River, and within 5 miles of the Murray, below the junction of the Murrumbidgee. Rabbits are very partial to its twigs; hence poisoned twigs are often used for rabbit-destruction.

The White Mangrove (*Avicennia officinalis*, Linn.) is sometimes browsed upon by stock. It is, of course, only found in salt-water estuaries.

The "Gooma" of the West (*Bertya Cunninghamii*, Planch.) is a fodder-shrub which has no chance of making headway where sheep feed. In spite of the poisonous natural order (*Euphorbiaceæ*) to which it belongs, there is no record of it having proved deleterious to animals. It has a pleasant bitter flavour.

Cattle are very fond of the leaves of our Native Fig-trees. For instance, in the winter, when the branches of the Moreton Bay Fig (*Ficus macrophylla*, Desf.) are pruned, cattle will eagerly devour every leaf, although the grass around may be both good and abundant. Both cattle and sheep are fond of the foliage of various She-oaks (*Casuarina*), particularly *C. Cunninghamiana*, the River Oak, though, perhaps, its acidulous nature is sometimes a drawback, causing scouring.

Such is a brief epitome of the fodder-plants of New South Wales. The mere enumeration of those which are eaten by stock would amount to a very considerable number. They necessarily vary in palatableness, bulk of fodder, nutritiveness, and so forth. Some day, reports by chemists and pastoralists on the value of our indigenous fodder-plants will be published, and I am confident they will show that the pre-eminence of New South Wales as a pastoral country is largely owing to her native grazing plants. In addition, it must be borne in mind that our people have been very enterprising in introducing the best fodder-plants from all parts of the world, and many of them have proved successful, contrary to precedent or expectation. The acclimatisation work is being pushed on steadily.

EUCALYPTUS TREES.

(By R. T. Baker, F.L.S., Corr. Memb. Ph. Soc. Gr. Brit., Lond.,
Curator, Technological Museum, Sydney.)

PERHAPS no country in the world can claim so distinctive a Forest Flora as Australia, with its characteristic "Gum-trees," which form so marked a feature of the landscape, and probably constitute three-fourths of the total vegetation of the whole continent. Of this large botanical fraction, New South Wales possesses a larger proportion of species than any other State of the Commonwealth—probably about 130 out of a total of 200 for the whole continent. During recent years much scientific investigation has been undertaken in New South Wales of the classification and economics of this important group of trees; nevertheless, a large amount of scientific investigation still remains for the economic botanist and chemist.

Neither has the systematic eucalyptologist been idle during the last ten years, for nearly fifty undescribed species have been recorded from this State alone.

The genus was first named *Aromadendron* by Dr. William Anderson, the surgeon of Captain Cook's second and third expeditions, when collecting with Captain Furneaux in Tasmania, where Hobart now stands; and, according to Mueller, the first species named was a "Stringybark" now known as *E. obliqua*, L'Her.

The name *Eucalyptus* was bestowed by L'Heritier in 1788, the word being derived from the Greek εὖ "well" and καλύπτω "I cover," in allusion to the operculum or lid which covers the calyx until the stamens are fully developed, and this is the name by which these valuable trees are now known in botanical literature.

The flowers, as a rule, are comparatively small for such large trees, and are differentiated from all others of the same natural order, and, for the matter of that, from almost all others in the vegetable kingdom, by the operculum or lid of the bud. This characteristic or feature has probably been formed by the adnation of the petals, which otherwise, like sepals, are wanting, although fully developed in the cognate genera, *Tristania* and *Angophora*.

As the stamens gradually mature and unfold, they throw off the cap or operculum, and so expose the nectory to the visitant insect polleniser, and in this connection a remarkable fact yet remains to be determined, viz., although the time of flowering of a number of species is synchronous, little or no cross-fertilisation appears to take place.

The number of species on the Blue Mountains is quite limited, and if cross fertilisation had taken place, innumerable species would be found there to-day; but such is not the case, and according to the data available, the number of species is exactly the same as it was nearly 100 years ago. Not only has this constancy of morphological character of species apparently been maintained over long periods, but recent researches carried out at this museum have proved also that each species shows no variation of chemical constituents, no matter how far apart the trees may grow, whether in California, South Africa, or Australia. Environment has probably, therefore, a slow influence in producing variation—that is, so far as our limited observations have been made during recent years.

The fruit is styled a capsule, and is, as a rule, pear-shaped or pilular, and is one of the best guides for specific determination.

The leaves, like other parts of these wonderful trees, are characteristic, the most common form being lanceolate-falcate, the other forms ranging from linear, or narrow lanceolate, to orbicular. Two forms, mostly cordate, and lanceolate, often occur on the same tree, when the former are called "sucker leaves," although not such in strict botanical terms. The normal leaves are fixed vertically, and so do not give so much shade as obtains with most trees. The venation is generally well pronounced, the lateral veins varying in the different groups in the angle of obliquity with the mid-rib. In this connection one of the most important discoveries of the research on the Eucalypts carried out at this museum was the correlation of the sciences botany and chemistry. It was found possible to group botanically and chemically the various species, according to the obliquity or the angle of the lateral veins, the venation of each group corresponding with the chemical constituents contained in the oil.

Thus those species commonly called "Bloodwood" have their lateral veins closely packed and almost transverse, a disposition that indicates the presence of Pinene as a principal constituent, the absence of Phellandrene, and traces only of Eucalyptol in the oil yielded by the leaves.

As the lateral veins became slightly more oblique and more open than those of the above group, it was found that this form of venation indicated the presence principally of Pinene and Eucalyptol, Phellandrene being absent.

The next form of venation indicates the presence of Eucalyptol, a diminishing amount of Pinene, and small quantity of Aromadendron oils.

The third class has the intramarginal vein farther removed from the edge than the previous groups, while the lateral veins are more distinct and slightly more oblique; in these are found Eucalyptol over 40 per cent., and traces of Phellandrene only in sub-class (*b*).

In the next group the intramarginal vein is not quite so far removed from the edge, the oil yielding Eucalyptol, Pinene, and Aromadendral—the Eucalyptol not exceeding 30 per cent., and Phellandrene being absent.

In group five, which has a more open venation, the oil consisted of Pinene, Eucalyptol, and Phellandrene—the Eucalyptol not exceeding 30 per cent.

The next group has the lateral veins more spreading and oblique than the previous one, when the oil contains Phellandrene, Eucalyptol, and the Peppermint Ketone—the Eucalyptol not exceeding 30 per cent.

Graduating from this group is the final division, which has the intramarginal vein far removed from the edge, and in some instances subtended by a secondary one. The lateral veins are very oblique—in fact, almost parallel with the mid-rib, the oil constituents consisting largely of Phellandrene and the Peppermint Ketone, Eucalyptol being almost entirely absent.

The systematic classification of the Eucalypts has always presented difficulties to the botanist, and several systems, founded on the morphology of the fruit, flowers, leaves, characteristics of the barks, &c., have been devised. None of these has been found altogether satisfactory nor generally adopted, and when the cognate science of chemistry was introduced as an aid to their diagnosis, the above systems were found quite unreliable and too artificial.

A new system has been laid down by Baker and Smith in their work "Eucalypts and their Essential Oils," for these authors, when working on morphological grounds alone, found that many of the so-called individual species possessed different barks, timber, oils, dyes, &c., a state of things which quite differed from the usual definition of a species, and, consequently, such an artificial system (as this research appeared to prove it) had to be discarded, and what is, apparently, a more real or natural system of classification had to be adopted, viz., founding a species, not on morphological characters of dried material alone, but on—

1. A perfect field knowledge of the trees.
2. The nature and character of their barks.
3. The nature and character of their timbers.
4. Morphology of their fruits, leaves, buds, &c.
5. Chemical properties and physical characters of the oils, dyes, kinos, &c., and any other evidence, such as histology, physiology, &c., that will assist in establishing differences or affinities of species.

Experience has shown that a species so founded is practically constant in specific characters, however great the range of distribution may be.

This system, which the authors claim to be a natural one, has been well received in America and Europe, and it is one that commends itself to the commercial community, especially the oil distiller, for by it he can ascertain, by inspection of the leaf of a Eucalyptus, the class of oil it will yield.

The genus Eucalyptus is of immense importance, whether considered in reference to the timber, essential oils, dyes, perfumes, or kinos.

TIMBERS.

In the rush for land settlement millions of these valuable trees have been felled and burnt off, so that to-day the supply of hardwood is becoming seriously less; especially so in the case of "Ironbark," for whereas in former years our Railway authorities would always specify "Ironbark" in calling for tenders for the supply of sleepers, to-day this particular kind is so difficult to procure that less durable timbers have to be accepted and used as a substitute. What is still more to be deplored is, that little, if any, effort is being made to re-afforest the country with these fast-disappearing valuable species.

In South Africa and California, a much more pleasing picture presents itself in regard to Eucalyptus cultivation, for there the "Gum" tree is so highly valued that vast areas are being reserved for its cultivation, and it is being introduced into all newly-opened country. The importation of Eucalyptus seed into South Africa from Sydney alone was valued, during 1904, at about £600. On the one hand Australia is cutting out and destroying with feverish haste one of its most magnificent gifts of Nature,—its Eucalyptus trees, whilst on the other hand South Africa is just as feverishly planting them in all directions, realising that in the next quarter of a century the number of Eucalyptus trees will probably be estimated by millions in that country, and their timber value will fall not far short of that number of pounds.

Timber is the most important product of our Eucalypts, and being hard and durable it is employed more particularly in house building, bridge construction, sleepers, piles, heavy wheels, railway goods waggons, wood-blocking, girders, ship building, and generally where durability and hardness are the desired factors.

The most highly-prized timbers of our "Gum" trees for specific purposes are:—

1. IRONBARKS.

Under this vernacular there are three marketable varieties. These are not generally sold under their distinctive vernacular, being all designated "Ironbark." They vary somewhat in their grain, texture, hardness, and durability, the White Ironbark being placed as perhaps the best of the three in these respects.

They are used principally for girders, sleepers, and wherever great strength is required in construction works such as bridges and wharves.

They are close grained, very hard, heavy, dark-coloured, and the most durable of all Eucalyptus timbers.

The commercial species are: White or Grey Ironbark (*E. paniculata*, Sm.), Narrow-leaved Ironbark (*E. crebra*, F.v.M.), Broad-leaved Ironbark (*E. siderophloia*, Benth.).

2. TALLOW-WOOD.

A greyish-yellow, hard, close-grained, heavy, strong, very durable timber, which can be used for any purpose requiring strength in structures.

It is used principally for bridge construction, house building, wood-paving, and especially for parquetry and flooring, and for the latter purpose is considered *facile princeps* of all our native timbers. Only one tree has this vernacular—*E. microcorys*, F.v.M.

3. MAHOGANIES.

These rank amongst some of our best commercial timbers. They vary in colour and texture of grain.

(*a*) Forest Mahogany (*E. resinifera*, Sm.).

A deep red coloured, open, free-working timber. It is, perhaps, too heavy for cabinet work, although the colour is a strong recommendation, but is very useful in building construction and wood-blocking.

(*b*) Bastard Mahogany, or Bangalay (*E. botryoides*, Sm.).

A reddish-coloured, hard, close-grained, interlocked timber, suitable for heavy timber framing, and very durable.

(*c*) Mahogany (*E. hemilampra*, F.v.M.).

A fairly hard, light reddish coloured timber, closer in the grain than the "Mahogany" (*E. resinifera*, Sm.), and not subject to the attack of borers like that wood. Very suitable for cabinet work.

(*d*) Swamp Mahogany (*E. robusta*, Sm.).

A hard, red-coloured, close-grained timber, well suited for sleepers, decking, and general building purposes.

(*e*) White Mahogany (*E. acmenoides*, Schau.).

A pale-coloured, hard, close, straight grained, heavy timber, suitable for bridge and wharf construction. It also makes excellent sleepers, being very durable in the ground.

4. GUMS.

This vernacular name is bestowed by settlers and timber-getters on those Eucalyptus trees which have a smooth bark. The species vary much in the nature and colour of their timber, and may be classified as—

(*a*) Red Gums (*E. tereticornis*, Sm.; *E. rostrata*, Sch.).

These produce a hard, close-grained, reddish-coloured, durable timber, excellent for many purposes.

(*b*) Grey Gums (*E. punctata*, DC.; *E. propinqua*, H.D. et J.H.M.).

These are of the same colour and texture as the above, but are heavier and more durable.

(c) Slaty Gum (*E. Dawsoni*, R.T.B.).

This is an excellent timber, and probably the best of the Gums. It is very hard, close-grained, and heavy, and is difficult to distinguish from Ironbark when in flitches or sleepers.

(d) Blue Gums.

E. globulus, Labill; *E. Maideni*, F.v.M.

These are both pale-coloured, hard, durable, fissile timbers.

E. saligna, Sm.

This is the famous "Blue Gum" of Sydney. It has a reddish-coloured, rather fissile, open grained timber. It is a splendid working wood, and used mostly for wheelwright work, house building, wood-blocks, &c.

(e) Mountain Gum (*E. goniocalyx*, F.v.M.).

A pale-coloured, hard, close-grained timber, very durable, and principally used for bridge construction, and house posts and joists.

(f) Spotted Gum (*E. maculata*, Hook.).

This tree is fairly well distributed throughout the coastal districts and ranges, and is a recognised commercial timber in the Sydney market. It is a fairly hard, pale-coloured, usually fissile timber, and is used extensively by coach-builders.

Much diversity of opinion exists as to its suitableness for wood-blocking, its bad repute for this purpose in some instances being, perhaps, due to the presence of sap-wood in the samples used.

The following can be ranked as second-class timbers, and are so used:—

(a) Flooded Gum (*E. paludosa*, R.T.B.).
(b) Scribbly Gum (*E. haemastoma*, Sm.).
(c) Ribbony or Manna Gum (*E. viminalis*, Labill.).
(d) Spotted Gum (*E. maculosa*, R.T.B.).

5. BLACKBUTT.

E. pilularis, Sm.

This is a pale-coloured, fairly hard, straight-grained timber, and one of the best all round commercial timbers of New South Wales, and is quoted in the price-list of coast timber merchants. It is used for railway goods carriages, posts and rails, shipwork, wheelwrights' work, bridge construction, and general building purposes.

6. STRINGYBARKS.

These constitute a useful section of the Eucalypts, as the timbers, although inferior to Ironbark and some other groups of the genus, are much used in general house building, for posts and rails, as well as for lighter work.

They have been divided into—

(a) White Stringybark (*E. eugenioides*, Sieb.).
(b) Small-leaved Stringybark (*E. Wilkinsoniana*, R.T.B.).
(c) Brown Stringybark (*E. capitellata*, Sm.).
(d) Red Stringybark (*E. macrorhyncha*, F.v.M.).
(e) Silver-top Stringybark (*E. laevopinea*, R.T.B.).
(f) Stringybark (*E. obliqua*, L'Her.).
(g) Stringybark, (*E. nigra*, R.T.B.).
(h) Stringybark (*E. dextropinea*, R.T.B.).
(i) Stringybark (*E. umbra*, R.T.B.).
Stringbark (*E. carnea*, R.T.B.).

7. BOXES.

The different species of "Boxes" are scattered throughout the State, but the timber, while utilised for various purposes on the farm and homestead, is seldom found on the Sydney market. The timber of most is close-grained, hard, and very durable in the ground, and is suitable for bridge construction, sleepers, &c.; it also makes excellent firewood. The species may be classified as follows:—

White Woods.

Box (*E. hemiphloia*, F.v.M.).
Bastard Box (*E. bicolor*, A. Cunn.).
White Box (*E. albens*, Miq.).
Grey Box (*E. quadrangulata*, H.D. et J.H.M.).
Box (*E. Bosistoana*, F.v.M.).

Light Brown Woods.

Bastard Box (*E. Fletcheri*, R.T.B.).
Bimbal Box (*E. populifolia*, Hook.).
Fuzzy Box (*E. conica*, H.D. et J.H.M.).
Mallee Box (*E. Woollsiana*, R.T.B.).

Yellowish Woods.

Yellow Box (*E. melliodora*, A. Cunn.).
Apple Top Box (*E. angophoroides*, R.T.B.).

Red Woods.

Ironbark Box (*E. affinis*, H.D. et J.H.M.).
Red Box (*E. pendula*, A. Cunn.).
Red Box (*E. ovalifolia*, R.T.B.).
Red Box (*E. ovalifolia*, R.T.B., var. *lanceolata*, R.T. et H.G.S.).
Red Box (*E. polyanthema*, Schau.).
Red Box (*E. microtheca*, F.v.M.).
Red Box (*E. Rudderi*, J.H.M.).

8. ASHES.

These are mostly pale-coloured woods, and are valued for house building, bridge making, &c., in the districts in which they occur, although, of course, not so durable as Ironbarks, Mountain Gum, Slaty Gum, Boxes, &c.

The best of this class are:—

(*a*) White Ash (*E. fraxinoides*, H.D. et J.H.M.).

This is a splendid timber, having a straight grain, and is quite pale-coloured, fissile, and resilient. The same remarks also apply to

(*b*) Mountain Ash (*E. oreades*, R.T.B.).

This is also a mountain species, and makes the best golf handles of any of our Eucalyptus timbers.

(*c*) Mountain Ash (*E. Sieberiana*, F.v.M.).

This timber is used for general farm work, but is darker in colour to the above species, and is affected sometimes with a few "pin holes." It is hard, heavy, and durable.

(*d*) Mountain Ash (*E. Delegatensis*, R.T.B.).

A pale-coloured, straight-grained, fissile, easily-worked timber, much used for house building in the south-eastern corner of the State.

9. MESSMATE AND PEPPERMINTS.

These trees are closely allied. The timber is pale-coloured, fissile, but not valued for its durability, and only used on farms in a general way, and when other more desirable timbers are scarce.

The varieties are—

(*a*) Messmate—*E. amygdalina*, Labill.; *E. vitrea*, R.T.B.; *E. fastigata*, H.D. et J.H.M. ("Cut Tail.")

(*b*) Peppermints—*E. piperita*, Sm.; *E. dives*, Schau.

10. BLOODWOODS.

These are timbers not much in request, and, in fact, not placed on the market, being mostly subject to gum-veins; but, nevertheless, they are very durable in the ground. The timber is fairly close-grained, fissile, and easily worked.

The trees are generally classified as—

(*a*) Red Bloodwoods—*E. corymbosa*, Sm.; *E. intermedia*, R.T.B.; *E. trachyphloia*, F.v.M.; *E. terminalis*, F.v.M.

(*b*) White Bloodwood—*E. eximia*, Sch. This is a pale-coloured timber, resembling in texture some of the Stringybarks.

Vernacular Names.—Care must be taken commercially in regard to the vernacular names, as they often have only a local significance.

OILS.

The first published record of a Eucalyptus oil is that contained in White's "Journal of a Voyage to New South Wales," where it is stated: "The name of Peppermint tree has been given to this plant by Mr. White, on account of the very great resemblance between the essential oil drawn from its leaves and that obtained from the Peppermint (*Mentha piperita*) which grows in England. The oil was found by Mr. White to be much more efficacious in removing all cholicky complaints than that of the English Peppermint, which he attributes to its being less pungent and more aromatic. A quart of the oil has been sent by him to Mr. Wilson."

This oil was extracted by First Assistant Surgeon D. Considen, who came out with the First Fleet, and a portion of whose letter in this connection is well worth reproducing here:—"Historical Records of New South Wales," Vol. I, Part II, page 220: ". . . We have a large Peppermint tree, which is equal, if not superior, to our English Peppermint. I have sent you a specimen of it. If there is any merit in applying these and many other samples to the benefit of the poor wretches here, I certainly claim it, being the first who discovered and recommended them. . ."

It is thus evident that one of the first products sent from New South Wales after its settlement was a Eucalyptus oil. From this time onward, it appears to have been extracted in a fitful way, till the late Mr. J. Bosisto, of Victoria, took up the systematic distillation in the sister State. And so the distillation of the oil has proceeded, until to-day it is a well-established industry in at least three of the States of the Commonwealth, the value of the exported product amounting in 1906 to nearly £20,000.

The first chemical investigation of the oil dates back only some thirty years when M. Clöez undertook a chemical investigation on the oil of *Eucalyptus globulus*, Labill., the material for his research being obtained from some young plants cultivated at Paris.

This event is important, as the term Eucalyptol was given by M. Clöez to the portion of oil distilling at about 175 degrees C., and it is this fraction that remains to-day the chief constituent of therapeutical oils.

Another important fact attaches to this investigation of M. Clöez, for he mentions that his material was obtained from Paris as well as Melbourne, and that the chemical results were the same, thus proving the practical constancy of the constituents of the oil of the same species of Eucalypts.

This question of constancy of chemical constituents in distinct species received much attention in the researches of Baker and Smith, and in every case tested, little or no variation was found.

The list of investigators of Eucalyptus oils would be too long to be reproduced in an article such as this, but their work will be found in scientific serial literature and monographs published during the last thirty or forty years.

The most exhaustive monograph yet published on the Eucalypts and their essential oils is that by Messrs. R. T. Baker and H. G. Smith, of the Technological Museum, Sydney.

Prior to this publication the officers of this commercial institution were often placed at a disadvantage for want of reliable data in regard to the economics of the Eucalypts of New South Wales, especially in regard to the oils, so that, in order to ascertain if this State possessed trees at least equal in yield and quality of oil to those of other States, a scientific investigation was undertaken, lasting over five years, and over 40 tons of material were obtained from all the States of the Commonwealth.

The results proved that New South Wales was just as rich as other States in its oil-yielding trees, and in several instances its trees produced better commercial oils, and can meet the world's demand for high or low grade Eucalyptus oils. These results have been published in book form by the Government Printer.

The following is the classification of the "Gum" trees by these authors, together with a very brief description of the oils:—

GROUP I.

Eucalypts which give an oil consisting largely of Pinene, without Phellandrene, and in which Eucalyptol is almost or quite absent.

This section includes the Bloodwoods and a few "Stringybarks," but as the oil of these is not at present of any commercial value, the species are not particularised.

GROUP II.

Eucalypts which yield an oil consisting principally of Pinene and Eucalyptol, but in which the latter constituent does not exceed 40 per cent. Phellandrene is absent.

Fifteen species were found to fulfil the above conditions, but none yield a commercial oil.

GROUP III.—Class (*a*).

Eucalypts which yield an oil consisting principally of Eucalyptol and Pinene, and in which the Eucalyptol exceeds 40 per cent. Phellandrene is absent.

This contains the most important commercial oil-yielding trees of the genus, and numbers twenty-seven species :—

Red or Forest Mahogany (*E. resinifera*, Sm.).
Red Box (*E. polyanthema*, Schau.).
E. Behriana, F.v.M.
White-Gum (*E. Rossii*, R.T.B. et H.G.S.).
Red Box (*E. pendula*, A. Cunn.).
Cabbage, White Gum or Mountain Gum (*E. dealbata*, A. Cunn.).
Eucalyptus tereticornis, Sm.; var. *linearis*, R.T.B. et H.G.S.
River Red Gum (*E. rostrata*, Schl.; var. *borealis*, R.T.B. et H.G.S.).
Spotted or Brittle Gum (*E. maculosa*, R.T.B.).
*Sallow or Swamp Gum (*E. camphora*, R.T.B.).
Grey Gum (*E. punctata*, D.C.).
Ironwood (*E. squamosa*, H.D. et J.H.M.).
Apple or Woollybutt, Butt Butt of Gippsland (*E. Bridgesiana*, R.T.B.).
*A Mountain Gum (*E. goniocalyx*, F.v.M.).
Bastard Box (*E. bicolor*, A. Cunn.).
E. viminalis, var. a.
Bembil Box or Poplar-leaved Box (*E. populifolia*, Hook.).
Woollybutt (*E. longifolia*, Link. and Otto.).
A Blue Gum (*E. Maideni*, F.v.M.).
*Blue Gum (*E. globulus*, Labill.).
E. pulverulenta, Sims.
*Argyle Apple (*E. cinerea*, F.v.M.).
Apple of Victoria (*E. Stuartiana*, F.v.M.).
E. Stuartiana, F.v.M.; var. *cordata*, R.T.B. et H.G.S.
Grey Mallee (*E. Morrisii*, R.T.B.).
*White Top, Gully Ash, White Ironbark (*E. Smithii*, R.T.B.).
Red Flowering Ironbark (*E. sideroxylon*, A. Cunn.).

GROUP III.—Class (*b*).

Eucalypts which yield an oil containing over 40 per cent. of Eucalyptol, but in which the Pinene is diminishing and Aromadendral is making its appearance, thus approaching the typical "Boxes." Phellandrene is absent.

This also includes some of the most important commercial oil yielding trees of the genus, and numbers six species :—

Bundy or Bastard Box (*E. Cambagei*, H.D. et J.H.M.).
*Blue Mallee (*E. polybractea*, R.T.B.).
*Bull Mallee (*E. dumosa*, A. Cunn.).
*Red or Water Mallee (*E. oleosa*, F.v.M.).
**E. cneorifolia*, DC.
E. stricta, Sieb.

GROUP III.—Class (*c*).

Eucalypts which yield an oil containing over 40 per cent. of Eucalyptol, but in which Phellandrene is making its appearance, thus approaching the Phellandrene oils.

Yellow Box (*E. melliodora*, A. Cunn.).
E. ovalifolia, R.T.B.; var. *lanceolata*, R.T.B. et H.G.S.

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* Oils at present being distilled in New South Wales.

Group IV.

Eucalypts which yield an oil consisting largely of Eucalyptol, Pinene, and Aromadendral, but in which the Eucalyptol does not exceed 30 per cent. Phellandrene is absent.

Red or Blue Gum (*E. tereticornis*, Sm.).
Ironwood (*E. punctata*, D.C.; var. *didyma*, R.T.B. et H.G.S.).
A Mallee (*E. gracilis*, F.v.M.).
Green, Red, or Brown Mallee (*E. viridis*, R.T.B.).
Mallee Box (*E. Woollsiana*, R.T.B.).
White Box (*E. albens*, Miq.).
Box (*E. hemiphloia*, F.v.M.).

Group V.

Eucalypts which yield an oil consisting of Pinene, Eucalyptol, and Phellandrene, but in which Eucalyptol does not exceed 30 per cent.

None of the twenty species in this group is at present being worked for oil.

Group VI.

Eucalypts which yield an oil consisting largely of Phellandrene, Eucalyptol, and the Peppermint Ketone, but in which the Eucalyptol does not exceed 30 per cent.

E. amygdalina is the most important oil species in this group, as at certain times of the year the oil will yield over 30 per cent. of Eucalyptol.

The Sydney Peppermint (*E. piperita*, Sm.).
*Messmate (*E. amygdalina*, Labill.).
White Top Messmate (*E. vitrea*, R.T.B.).

Group VI.—Class (*b*).

Eucalypts which yield an oil consisting largely of Phellandrene and the Peppermint Ketone, and in which Eucalyptol is almost, if not quite, absent.

The species of this group are mostly known vernacularly as Peppermints, and should the constituent Piperitone become of therapeutic value, *E. dives* will supply the demand, as the yield of oil is sometimes over 3 per cent.

Cabbage or White Gum (*E. coriacea*, A. Cunn.).
Mountain Ash (*E. Sieberiana*, F.v.M.).
A Mountain Ash (*E. oreades*, R.T.B.).
*Peppermint or Broad-leaved Peppermint (*E. dives*, Schauer).
*White-top Peppermint or River White Gum (*E. glomerata*, J.H.M.).
White Ash Silver-topped Mountain Ash (*E. Delegatensis*, R.T.B.).
Stringybark (*E. obliqua*, L'Her.).

Group VII.

Eucalypts which yield an oil not readily placed in the other groups.

Lead Gum, Black Sally (*E. stellulata*, Sieb.).
*Paddy's River Box, or the Camden Woollybutt (*E. Macarthuri*, H.D. et J.H.M.).
Black Gum (*E. aggregata*, H.D. et J.H.M.).
E. virgata, Sieb.
Bastard Mahogany (*E. patentinervis*, R.T.B.).
E. apiculata, R.T.B. et H.G.S.
Citron-scented Gum (*E. citriodora*, Hook.).
Lemon-scented Ironbark (*E. staigeriana*).

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* Oils at present being distilled in New South Wales.

The result of all this investigation has shown that the constituents of these oils are somewhat numerous, but many of them are identical with substances occurring in commerce and obtainable from other sources, so that the extraction of these is governed by the ordinary rules of supply and demand.

Besides those indicated and not yet determined, Eucalyptus oils contain the following constituents, many of which are the outcome of the research at the Technological Museum:—

Eucalyptol	Oxides.
Eudesmol	
Geraniol	Alcohols.
Methyl alcohol	
Ethyl alcohol	
Isobutyl alcohol	
Amyl alcohol	
Aromadendral	Aldehydes.
Citral	
Citronellal	
Butaldehyde	
Valeraldehyde	
Piperitone (Peppermint constituent)	Ketone.
Geranyl acetate	Esters.
Amyl eudesmate	
Valeric acid ester	
Acetic acid ester	
Acetic acid (free)	Acid.
Endeomic acid	
Aromadendrene	Sesquiterpene.
Pinene (both dextro- and laevo-rotatory	Terpenes.
Phellandrene	
Limonene	
Cymene	Alkyl-benzene.

The above are found in the oils of the species in varying amounts, individually occurring more abundantly in some oils than in others, so that it is now known from which investigated species of Eucalyptus any constituent required can be most readily obtained, particularly as the constituents peculiar to the oil of identical species are comparatively constant. It would, however, often be difficult to say whether a particular constituent was present in any particular oil or not, and it is possible that many do occur in some of the oils in which they have not yet been detected. Esters appear to be present in all Eucalyptus oils, varying in amount from traces up to 75 per cent. of Geranyl-acetate as a maximum. Phellandrene is the principal constituent in the oils of several species. Pinene occurs in the oils of some species in such abundance that the product is practically an oil of turpentine; so that it does not necessarily follow that oils containing no Phellandrene are better than those in which it is found. A few species contain the peppermint constituent in quantity, and at certain times of the year the oil of *E. dives* would give a comparatively large fraction rich in this constituent, which fraction might be considered as a terpeneless oil; and if this peppermint constituent is eventually found to be of medicinal value, the oil could be supplied commercially as such, and in any quantity.

Eucalyptus trees are so abundant in Australia that the supply of the various types of Eucalyptus oils may be considered practically unlimited, whether required for medical or for manufacturing purposes; but owing to the numerous constituents the extraction of the oil requires to be intelligently performed, and if the production be governed by scientific investigation, then the oil should be comparatively constant, and practically of a uniform quality.

Of the twenty-four distinct constituents above enumerated, many occur only in small quantity, whilst others occur only in one or two species. Others again are necessarily removed in the process of rectification, as they boil at low temperatures, or they are of so irritating a quality that they could not possibly be administered medicinally.

Eucalyptol.—This substance has always been considered the principal medicinal constituent of Eucalyptus oils, and being the first isolated has received much attention at the hands of the chemist and pharmacist.

Pure eucalyptol or cineol, $C_{10}H_{18}O$, is identical with cajuputol, and has recently been found, by Baker and Smith, Proc. Roy. Soc., N.S.W., 1906, also to occur (55 per cent.) in the oil of *Melaleuca thymifolia*, Sm., a small shrub of the Tea-tree family occurring plentifully around Port Jackson on moist ground.

It is a colourless liquid, with characteristic odour, and occurs in most of the oils of the species. It has a specific gravity of 0·927, and boils at 176 degrees C., it forms a crystalline compound with phosphoric acid, and this reaction is the method mostly employed for the detection and determination of this constituent in Eucalyptus oils.

To pass the British Pharmacopœia test, an oil must have a specific gravity of 0·91 to 0·93, and should become solid on addition of phosphoric acid, the medicinal value of oils being thus determined by the amount of eucalyptol they contain.

Eudesmol.—This substance was first discovered by Baker and Smith in the oil of the Sydney Peppermint (*E. piperita*, Sm.), the species from which the first Eucalyptus oil was ever obtained, as recorded in White's Voyages (1789).

It was afterwards found to occur in great quantity in the oils of *E. virgata*, Sieb., and *E. camphora*, R.T.B., and in less amount in the oils of *E. macrorrhyncha*, F.v.M., *E. Smithii*, R.T.B., *E. globulus*, Labill., &c.

Dr. Cuthbert Hall tested its bactericidal properties by dissolving it in Eucalyptol and Piperitone, and found it to slightly increase the activity of these, but not to any marked extent,—for example, 10 per cent. eudesmol dissolved in Piperitone was fatal to Bacillus Coli Communis in thirty minutes, whereas Piperitone itself requires forty minutes.

Geranoil.—So far, this valuable constituent, which comprises the greater portion of the Rose oil (Otto of Roses) of commerce, has only been found in one of the Eucalyptus, viz., *E. Macarthuri*, H.D. et J.H.M. (Paddy's River Box or Camden Woollybutt). The yield of oil from this species is ·112, or 1 lb. 2 oz. from 1,000 lb. of leaves, which was found to contain over 60 per cent. of geranyl-acetate when distilled in October, over 63 per cent. in December, and 75 per cent. in September.

The price of this oil in the European market varies from 10s. to 15s. per lb.

Aromadendral.—This aldehyde, which was discovered by Mr. H. G. Smith, is found to occur in many Eucalyptus oils, but more abundantly in the Eucalypts known as "Boxes."

It is yellowish in tint, very mobile, with a rather disagreeable persistent odour, though some consider it not unpleasant, and its odour is marked when mixed in the oil. It is strongly lævo-rotary.

It is suspected that the natural eucalyptol in Eucalyptus oils is in some way due to the presence of this aldehyde, as all the oils containing it are, when rectified, more or less tinted yellow, and usually contain more or less eucalyptol; and, perhaps, also, the yellowish tint of those oils richest in eucalyptol is also traceable to the original presence of aromadendral.

Dr. Cuthbert Hall (Sydney University) states that, of the five aldehydes in Eucalyptus oils, this is the most important as regards action on bacteria; of the others, citral only occurs in small quantity in the oils of one or two species, citronellal makes up the greater part of the oil of species *E. citriodora*, Hook., while butaldehyde and valeraldehyde are too irritating to the bronchial mucous membrane to be of any use for administering medicinally.

It was found by this investigation to destroy the Bacterium Staphylococcus in fifteen minutes, and Bacillus Coli Communis in ten minutes, thus proving that the presence of this constituent in the oils of the "Boxes" largely increases their bactericidal powers.

Citral.—Only one Eucalyptus yielded this constituent in any quantity, viz., *E. Staigeriana*, F.v.M., a tree with quite a restricted distribution in Queensland.

This substance is of very frequent and extensive occurrence in essential oils, and gives the characteristic odour to lemon oils and oils having a lemon-like and verbena aroma, such as the oil of the Lemon Grass of India and lemons. It is one of the most highly valued of Eucalyptus constituents, and is largely used in perfumery.

Citronellal.—This constituent occurs only in a few species, but most plentifully in the oil of *E. citriodora*, Hook. This oil, which is largely extracted in Queensland at Rockhampton, where that particular species is abundant, is much used as a perfume for soap.

Piperitone.—The group of Eucalypts commonly known as Peppermints was so named on account of the marked peppermint odour of the leaves. The substance giving this odour occurs in many species, and has been named Piperitone; and should this body become of industrial and therapeutical value, the supply is almost unlimited as the highest yield of oil over other species of the genus occurs in the Peppermint.

When placed on the tongue, it has a hot and pungent effect, and when swallowed has a stimulating and carminative effect. It is undoubtedly useful in influenza, and possibly so in acute coryza. Baker and Smith affirm that, as far as their empirical knowledge goes, it is more efficacious in cases of influenza than eucalyptol.

The terpene Eucalyptus oils like *E. dives* are coming into demand, and orders have recently been given in London for 5 and 10 ton lots, so that the wish expressed in the preface by Baker and Smith, in their "Research on the Eucalypts and their Essential Oils"—"We look forward to the time when science shall discover new commercial openings for these oils; and in the increased demand that will then necessarily arise, New South Wales will secure her share of the production"—is about to be realised.

Dr. Cuthbert Hall's experiments show that the bactericidal properties of Piperitone are well marked, Bachillus Coli Communis being killed in forty minutes and Staphylococcus in four hours.

Aromadendrene.—This substance occurs in almost all Eucalyptus oils, and is of equal bactericidal nature to Piperitone.

Pinenes of Eucalyptus Oils.—Some few years ago the New South Wales Eucalyptus oils were discredited in the London markets, owing, as it was stated, to their being sophisticated with oil of turpentine. Recent scientific research has satisfactorily demonstrated that such is not the case, and that the pinenes present in these oils were the actual product of the trees from which the oil was obtained. The presence of a turpentine constituent in the oil of *E. globulus*, Labill., was discovered by a French chemist as far back as 1870, and other continental chemists have verified this discovery.

It was not, however, till a research was undertaken here, in the home of the Eucalypts, that it was found that from some of the species a very fair oil of turpentine can be obtained, corresponding to either the American or French varieties, and it thus becomes impossible to determine whether a Eucalyptus oil has been adulterated with commercial oil of turpentine or not.

As these pinene oils obtainable from *E. dextropinea*, R.T.B., and *E. laevopinea* do not meet the present requirements of the British Pharmacopœia for medicinal Eucalyptus oils, they should only be sold for what they are, namely, Eucalyptus turpentine oils.

In these oils, however, New South Wales has a reserve of turpentine oils yet unworked.

Dr. Cuthbert Hall's investigations proved that dextropinene was the better bactericide of the two.

Phellandrene.—This terpene of Eucalyptus oils is found in large quantities in some of the species of Eucalyptus, mostly *E. dives*, Schau., and *E. amygdalina*, Labill., and cognate species.

This substance is rigorously excluded from Eucalyptus oils by the Pharmacopœia test, being the reputed cause of the coughing when inhaling these oils. Dr. Cuthbert Hall disputes this, and at the same time gives it a high rank as a bactericide.

Conclusion.

Much research work yet remains to be done before our knowledge of the pharmacology and therapeutics of Eucalyptus oil is complete.

It has been strongly recommended for surgical dressing, owing to its antiseptic properties, and it has been used with success in a variety of conditions, such as diphtheria and laryngeal diseases, as a rubefacient. The inhalation of Eucalyptus vapour has also proved efficacious in the treatment of diphtheria, scarlet fever, whooping-cough, and influenza. It has also been used as a remedy for typhoid, cancer, and erysipelas with some measure of success.

It can be used in perfumery, carbolic soap-making, disinfectant, &c., and the bye-products of oil distillation present an untouched field of industry.

Now that the supply is assured, and distillers have come to recognise the value of keeping the oils of the various species distinct, there should be a great commercial future for these oils, whose utilisation in the numerous branches of trade and industry are almost endless.

KINOS.

This is the name given to a product of the Eucalyptus trees. It occurs as an exudation on the bark, or in veins in the timber itself. It is red in colour, and consolidates on exposure to the air, and is found in almost every species of the genus. Its chief use at present is for tinctures, and the best kino for this purpose is that obtained from the Red Gum (*E. calophylla*, R.Br.), from Western Australia, as it shows no tendency to gelatinise when so prepared.

Should chemistry succeed in discovering new avenues of industry for these substances, the supply is almost unlimited. They can also be used for tanning purposes.

DYES.

One important yellow dye has been obtained from the leaves of Eucalyptus, and has been given the name of Myrticolorin. It is almost identical with Quercitrin, the yellow dye made from *Quercus tinctoria*, B., of North America, and, although brought directly under the notice of manufacturers in Europe, has not yet become a commercial commodity.

Both aromadendrin and Eucalyptus kinos can also be used as dye substances.

THE VITICULTURAL INDUSTRY.

(By M. Blunno, Viticultural Expert, Department of Agriculture.)

THE gradual decrease in the imports of foreign wines into this State is proof of the progress of the viticultural industry, and of the increasing favour which the wines of New South Wales find on the local market. A better system of distribution would certainly increase the local consumption, and a better organisation, aided by more capital, would foster the export trade to the United Kingdom, where the wines of this country have already received unstinted praise. In some cases the agents of London wine merchants dealing specially in Australian wines pay periodical visits to this State in order to buy for English firms. The position occupied by Australia in the exports to that country is very satisfactory, taking into consideration the difficulty of competing with countries like France, Spain, and Portugal, which produce wines of long and world-wide reputation, and where old firms with capital, long experience, and old connections strive to keep their position on the richest market of the world. Australia, as a whole, occupies the fifth place among the wine-exporting countries to the United Kingdom. These are the figures for 1906:—

	gallons.
France	4,104,551
Portugal	3,700,018
Spain	2,790,596
Netherlands	838,738
Australia	626,620

Comparing the actual acreage under vines with the area of land suitable for vine-growing, the potentiality of this country to become the "Œnotria of the Antipodes" is easily borne out. New South Wales, for its climate, produces a variety of wines ranging from the lightest clarets, or wines of the Hock type, to the heaviest wines for blending purposes and dessert wines, such as those of the Port, Sherry, Madeira, and Muscat types. On the Hawkesbury River and in various parts of the counties of Cumberland and Camden, on the Hunter and Williams Rivers, on the Paterson, in the Inverell district, on the Lachlan River, and round Mudgee, the light table-wines, white and red, are produced. In the Corowa and Albury districts, and round Wagga and Junee, wines of a different class are grown, which are characterised by their alcoholic strength, their richness in colouring and other extractive matters, by their tannin, and their high proportion of mineral constituents. The best wines from Corowa and Albury, and some of the more full-bodied wines, red or white, from the other districts, are principally exported to England, where they are in great demand, and are sold mostly under the name of "Australian Burgundy." These wines, when properly looked after in suitable cellars, handled by expert cellarmen, and well matured, are good *vins de rôti*, and a most suitable beverage in the climate of the British Isles. In the same districts we find that wines of the Port, Sherry, and Madeira class can attain excellence, and many of them are really very similar to the original types. There is a good trade in them, especially for local consumption. The Muscats produced in the same parts of the State are delicious for their aroma, for their lusciousness, and for the proportion between alcohol, extract, and grape sugar. Their tawny or gold-yellow tint, bright, showing flashes of refracted light, is most inviting to the eye, while their penetrating flavour tickles the olfactory organs and disposes the palate to a Lucullian feast. A good trade is carried on in Muscat wines, and white, sweet wines in general. These are a class in themselves, and are known in the jargon of the wine trade as "Ladies' Wines," because they are preferred by ladies for their aroma and sweetness. The light wines, whether white or red, *vins ordinaires*, are grown in the colder districts, or in those where a heavier rainfall throughout the vegetation period prevents the concentration of the juice such as is required for the production of the heavier and richer wines. These lighter wines are preferred by the real wine-drinkers, who are represented principally by the foreign population of the State. These people, used to wine as an ordinary beverage with their meals, keep up their national habit in Australia. Under this mild climate, they prefer a lighter wine than the Burgundy or Port types, and therefore clarets and white wines of the Hock and Chablis class are much sought after by them. The native Australian is also gradually taking to them, and it is a good sign that the long-standing prejudice against the wines of this continent is disappearing.

The following are a few data from the chemical analysis of some New South Wales wines:—

Name of Wine.	Absolute Alcohol per cent. by volume.	Spirit Proof per cent.	Extractive Matters per cent.	Sugar per cent.	Ashes per cent.	Fixed Acidity per mil., as Sulphuric Acid.	Manganese in grammes per litre, as Mn.
			SWEET WINES.				
1 Sweet White...	19·68	33·4	3·84	6·16	......	......	......
2 Port..............	19·96	34·0	4·4	6·13	......	......	......
3 Sweet Red......	18·25	30·9	5·47	8·28	......	......	......
4 Sweet White...	15·12	25·5	......	3·94	......	......	......
5 Sweet Red......	17·37	29·4	......	5·80	......	......	......
6 Sweet White...	17·92	30·4	......	6·81	......	......	......
7 Sweet Red	20·60	35·1	......	2·9	......	......	......
8 Sweet Red	20·71	35·3	......	5·48	......	......	......
9 Sweet White ...	17·17	29·1	......	3·26	......	......	......
10 Sweet Red	16·36	27·7	......	4·01	......	......	......
11 Port.............	19·84	34·7	3·28	5·43	·259	2·5	......
12 Sweet Red	21·0	35·8	4·04	5·30	·326	2·1	......
13 Sweet White ...	18·48	31·3	3·40	5·12	·272	2·0	......
14 Sweet Red	16·61	28·0	4·30	4·22	·284	3·0	.....
15 Sweet Sherry...	18·98	32·1	2·46	6·97	·276	3·0	......
16 Muscat	18·58	31·4	3·86	8·71	·284	2·3	......
17 Port................	18·36	31·2	3·99	6·75	·291	2·4	......
18 Port...	18·34	31·2	4·24	9·04	·284	2·3	......
19 Muscat	18·54	31·4	4·53	8·26	·421	2·6	......
20 Sweet White...	23·4	40·3	2·98	4·75	·244	1·6	......
21 Sweet White ...	16·64	28·3	3·28	8·67	·251	3·0	·0015
22 Port..............	14·68	24·8	3·97	11·69	·185	2·6	......
23 Port...............	17·64	30·0	3·36	7·5	·275	2·6	......
24 Port...............	15·85	26·8	3·34	4·37	·261	3·0	·001
25 Sweet White ...	16·64	28·2	2·3	2·38	·22	2·9	·0006
26 Port.............	17·94	30·5	3·49	5·16	·295	2·15	......
27 Sweet White ...	18·24	30·9	2·98	4·12	·208	2·14	......
28 Sweet White ...	18·74	31·7	2·7	5·37	·233	2·02	......
29 Sweet White ...	16·94	......	4·36	5·94	·332	1·6	.....
30 Port..............	17·44	......	4·2	5·73	·394	1·5	......
31 Madeira	17·94	30·5	5·64	7·16	·299	......	......
32 Port...............	18·44	31·3	4·10	6·4	·295	......	......

Name of Wine.	Absolute Alcohol per cent. by volume.	Spirit Proof per cent.	Extractive Matters per cent.	Sugar per cent.	Ashes per cent.	Fixed Acidity per mil., as Sulphuric Acid.	Manganese in grammes per litre, as Mn.
DRY WINES.							
33 Burgundy	15·30	23·8	2·488	0·44	·258	2·47	......
34 Claret	12·7	23·1	2·51	0·25	·270	2·94	......
35 Riesling	14·74	24·0	2·094	......	·184	3·2	......
36 Madeira	14·84	24·4	2·147	......	·188	3·2	......
37 Claret	13·71	23·1	2·55	0·6	·311	3·0	......
38 Burgundy	15·77	26·7	2·4	0·7	·308	2·6	......
39 Claret	11·87	20·0	2·38	......	·260	3·3	......
40 Claret	12·78	21·6	2·45	......	·232	2·9	......
41 Claret	15·07	25·4	2·85	0·22	·246	2·3	·00088
42 Claret	12·5	21·0	2·81	0·16	·297	3·1	·0012
43 Hock	13·82	21·3	1·99	......	·180	2·7	......
44 Hock	11·86	19·9	2·1	......	·188	2·5	·0014
45 Sherry	21·0	35·8	2·74	0·143	·246	2·3	......
46 Madeira	18·78	31·8	2·710	0·185	·216	2·02	......
47 Sherry............	19·08	32·3	3·46	0·120	·223	2·3	......
48 Sherry............	17·24	29·2	3·27	0·182	·300	2·2	......

Visitors to some of the wine-growing districts of this State will find some grand scenery among the vine-clad hills, where the light emerald-green of the vineyards forms a harmonious contrast with the sombreness of the Australian bush. The hill-tops are dotted with pretty homesteads, towering over the straight rows of vines, which form like a succession of walls of entwined sprigs, trembling and murmuring at the kiss of the breeze.

During the last twenty years science has contributed to the progress of the viticultural industry throughout the world. A better knowledge of plant pathology has helped to overcome many new parasites which at the outset threatened viticulture with extinction. Agricultural chemistry has taught how to maintain the fertility of a vineyard and how to increase it without a falling-off in the quality of the product. Educational establishments have been created alongside experimental stations (and a generation of scientific experts produced), which exercised and exercise a multiform activity in the industry and in the propaganda of modern knowledge. Some of the highest intelligences, with Pasteur leading, have devoted their attention to viticultural questions. With the assistance of biology and bacteriology, wine-making has been lifted to a level which was not dreamt of thirty-five years ago. The theory of fermentation being explained, the agents of vine diseases being discovered, the real factors of effects until then unexplained being brought to light, wine-making, or œnology, as it is more properly called, was able to rid itself of the old rule-of-thumb practices, to shake off the shackles of empiricism, and to rise to the dignity of technology founded on science.

Although Australia is so far removed from the seats of European learning, where all the progress in connection with viticulture has been made, yet up-to-date notions have gradually reached this continent through the enlightened action of the Government in securing the services of three or four scientific experts. Viticultural pioneers did arrive thirty or forty years ago from Europe, especially from Germany, but they left their fatherland before science had done so much for the industry, and, therefore, particularly in the matter of wine-making, they did not bring with them that wide knowledge which is necessary when starting an agricultural enterprise in a new country with a totally different climate.

Since the last influx of European immigrants, hardly any European vigneron has settled in this country, and truly the expansion of the industry has been mainly due to the enterprise of young Australians, who, having most of them started with modest means, have found the industry profitable, and have generally extended their vineyards. It is to be hoped that the encouragement that it is intended to give European agriculturists and agricultural labourers to come to our shores will soon bring a class of viticultural settlers for the development of the vine-growing industry. The English market can take ten times more wine than at present exported thereto, while the Eastern markets are also full of possibilities for a brisk export trade. Further still, an influx of European immigrants will bring to New South Wales a number of people whose national beverage is wine, and the local demand will increase accordingly.

Intending vine-growers will find here everything required to make a proper start:—

Italians will find their pet varieties—

Trebbiano,
San Giovese,
Malvasia,
Canaiolo,
Mammolo.

Frenchmen will feel quite at home with their—

Syrah (Syn. Red Hermitage),
Malbeck,
Verdot,
Cabernet,
Mataro (Syn. Black Spanish-Lambrusquat),
Aramon,
Blanquette,
Pinot noir (Black Cluster),
Pinot blanc,
Muscat de Frontignac,
Gouais, and others.

Spaniards will delight in their—

Verdehlo.

and Germans and Hungarians in their—

Riesling and Tokay (Syn. Furmint).

The table-grape industry is one of the most flourishing in this State, and hundreds of families live easily on a vineyard of 4 or 5 acres by growing grapes for dessert. Three tons of good fruit per acre is an ordinary yield, which means a net profit varying from £40 to £60 per acre. An acreage as small as that mentioned hardly requires the employment of outside hands, the father and a grown-up son being quite sufficient to cultivate, prune, dress, spray the vines, pick the grapes, pack and market them. Growers who have the foresight to plant very early and very late varieties realise still higher profits, as they avoid the time of glut for selling their crop.

The soil for vine-growing need not be of the best, indeed, the vine is not a bit exacting in matter of ground; and there are splendid vines a few miles from Sydney growing in soils which have proved refractory to any other cultivation.

The principal varieties grown are the—

Black Hamburg (Syn. Frankental),
Black Muscat Hamburg,
White Sherry,
Doradillo;

and, although not so extensively, also the—

Black Prince,
Chasselas,
Centennial,
Lady Downe's Seedling,
Mrs. Prince's Black Muscat,
Wax Waltham Cross,
Duke of Buccleugh,
Gros Colman,
Black Morocco,
Gordo Blanco,
Royal Ascot,
Daria, and others.

The raisin and currant industry is also very profitable, and the Gordo Blanco, the Sultana, the Thompson's seedless, and the various kinds of currants grow luxuriantly under this climate, producing a crop that, when dried, need fear no competition with the imported article. The local consumption is great, and this State is still dependent on Asia Minor, although it would be possible to grow within the State, not only enough to meet the local demand, but a surplus for export.

In Australia vines are planted wide apart, from 6 to 8 feet each way, to allow of the tillage being done by machinery; as there is not a vineyard in which, whenever possible, machine labour is not substituted for hand. Land being cheap, and there being plenty of it, the distance between the rows and between vine and vine in the same row is far greater than the average distance adopted in Europe. Each individual plant, therefore, grows very strong, and the yield per acre in quantity and quality is quite up to the standard of European vineyards. The cost of production is low, because all the working of the soil is done by horses, and because very little treatment with fungicide and insecticides is required. There are very few fungi and insect pests to guard or fight against, and the oïdium and anthracnose make only occasional visitations. There is a sort of Rhynchites (*Horthorrhinus Klugii*) which occurs at intervals; but it does very little harm indeed, and only affects a small patch or two in a vineyard. The vine-borer does very little damage, so also do the white ants (termites). I have mentioned the existence of these pests merely to give a true idea of what intending settlers may expect to find, as I would have been perfectly justified in not mentioning them at all on account of the very slight damage they do.

Hailstorms are hardly known in this continent, nor are late frosts. During the last ten years of my Australian experience as Viticultural Expert to the State Government, I have been intimately connected with the industry, and I have known of only two vineyards which were rather badly damaged by hailstorms, and of a few which were affected by one late heavy frost. Let now the European grower compare the terrible scourges he has to fight against all the year round, as well as the frequency of hailstorms and spring frosts in his continent, and he will come to the conclusion that Australia is a real paradise.

The legislation regulating the distillation of wine by the vignerons themselves, *bouilleurs de crû*, and the use of spirit for the fortification of wines of the dessert type, is the most liberal I have ever known to exist anywhere. Vignerons can distil wines and fortify the other wines with the spirit obtained therefrom by paying 6d. excise duty per gallon of proof spirit. Sixpence is equivalent to 63 centimes of French money; 1 gallon is equal to 4 litres 55 centilitres; and proof spirit corresponds to a strength of 57·27 per cent. by the Gay Leussac alcoholometre.

Good viticultural implements, as well as cellar machinery and casks, are locally made; therefore, any intending settler will find everything required to make an immediate start. The State Department of Agriculture includes a Viticultural Branch, composed of a qualified expert with European training and long local experience, who is ever ready to assist beginners with his advice. This branch of the Service includes also an œnological laboratory for the analysis of wines. Such analyses are made not only under the provisions of the Wine Adulteration Act, which is intended to prevent wine sophistication, but also for the testing of wines submitted by the growers themselves who wish to be informed about the chemical composition of their wines, their palatable characters, their faults, and the way to remedy them in the future. The expert also pays personal visits to the vineyards when so requested. All advice given by the Government Expert, and all work done at his laboratory and office, all his personal visits to the vineyards of private individuals, are free of charge, the expenses being totally borne by the Government.

Among the various agricultural experiment stations under the Department of Agriculture there is one specially devoted to viticulture, where phylloxera-resistant vines are grown. From this, thousands of cuttings and rootlings of the most accredited kinds are yearly distributed to all applicants at a very low rate, with the view both of helping vignerons to reconstruct their vineyards which have become infected by this disease, and also to help intending vignerons to make provision against any possible outbreak of the same plague. Phylloxera has existed in this State for the last twenty years, but owing to the repressive measures taken by the Government to check it, and owing to the fact that vineyards are generally scattered and not contiguous, this pest has done far less harm than in Europe during the same period of time. There is any amount of land yet available for viticultural purposes in this State, and new settlers could therefore choose their sites in districts far removed from the seats of phylloxera infection, where they could plant the ordinary vines and yet be quite safe from any contagion.

METEOROLOGY.

(*By H. A. Hunt, F.R. Met. Soc., Commonwealth Meteorologist.*)

NOTE.—For the convenience of the general reader it has been thought desirable to give at the close of this chapter a glossary of the chief technical terms contained therein. It is to be regretted that space would not permit of the insertion of several maps and diagrams which would have added greatly to the interest and clearness of the subject-matter.

THE weather of New South Wales is determined chiefly by the anticyclones which pass almost continuously across the face of the continent from west to east; indeed, this movement is characterised by such regularity as to suggest that the anticyclones form a continuous belt round the globe. It is quite possible, however, that the land mass of Australia is the agent by which they are detached from the main high-pressure stream and form individual circulating bodies when approaching the continent, and several reasons may be adduced in support of this theory. There is first the remarkable fact that the mean area of these systems is nearly coincident with that of Australia, while, in addition, there is frequently a tendency for their isobars to assume a similar contour to that of the coast-line, this peculiarity being noticeable at times along the northern shores.

The explanation of the existence of a high-pressure belt, or greater preponderance of atmospheric pressure, between latitudes 27 and 37, probably lies in the fact that this area is coincident with the zone in which the polar and equatorial currents meet, and for some time circulate, before continuing their journey north and south.

The easterly movement depends, of course, on the revolution of the globe, the varying rates being regulated by the momentum of the air at the equator, and the comparative inertia at the poles (it being accepted that there is an interchange of currents between the equator and the poles). Thus, when the anticyclone is travelling quickly, its momentum has been acquired in equatorial latitudes, and conversely a retrograde movement is the natural resultant in a polar current. When stagnation takes place, the inference is that the polar and equatorial forces are balanced.

A general surging movement occasionally takes place in the atmosphere, sometimes towards, and at other periods from the equator. The movement causes sudden and unexpected changes in the weather; but the forces controlling it are not clearly understood. Probably these sudden displacements of the air systems of the continent are due to thermal action, resulting in expansion or contraction in the atmospheric belts both to the north and south of Australia. When the atmospheric surge is to the south a sudden change to heat is experienced, while an approximation to polar conditions is brought about when the surging movement is to the north. Should it be found that this surging movement takes place on both sides of the equator, the occasional coincidental extremes of climatic elements experienced in the northern and southern hemispheres would thereby be accounted for.

CYCLONES.

Australia is situated directly in the path of the Great Southern high-pressure systems, and consequently is peculiarly free from the visitations of cyclones; but an occasional one may reach the shores of New South Wales from the north-east tropics, generally between the months of May and

September. At other times they may travel north from the Antarctic low-pressure belt, either coming direct from the south and developing their greatest intensity on the seaboard, or generating over the Great Australian Bight, and travelling in a north-east direction from the southern districts of South Australia, across Victoria and this State to the Tasman Sea. Here they appear to recurve southwards and become absorbed in the low-pressure zone whence they originated.

The monsoonal disturbances, or tongue-shaped depressions, are also on rare occasions the source of cyclones. These appear to form at the end of the tongues when located over the central part of Australia. During the process of development an annular isobar is first noticeable there, formed by an apparent lateral contraction in the isobars some distance north of the end of the tongue. A detachment finally takes place, and this becomes an independent system forming inner rings of pressure or isobars as it travels eastward, when, as with cyclones from the other sources mentioned, it developes its most violent characteristic on reaching the coast-line. There are certain peculiarities about the formation of some of our smaller cyclones which suggest that the vortices are formed by a local rushing or escape of anticyclonic air rather than that the violent winds are caused by the exhaust force of the cyclonic vortex; in other words, the cyclone appears to be formed by the violent wind, instead of the cyclone causing the wind. As an illustration: suppose the anticyclone to be a vast circulating body of water, enclosed by a circular-shaped dam, and let a tangent cut or outlet be made on the edge of the dam, allowing some of the water to escape through the channel. The general circulation of the whole body of the water would thereby be gradually increased, the movement increasing spirally outwards from the centre to the outer circulating diameter of the dam, with the greatest velocity near the outlet. A volume of water equal to the capacity of this outlet would escape, and part of it would rush past the opening with a velocity nearly equal to that of the volume that escaped, and in consequence a circular depression or vortex would result in the surface of the water in proximity to the opening. This action appears to take place in some of our smaller cyclones, for the following reasons:—The greatest velocity is confined to one side of the cyclonic system, and along only a comparatively small portion of the isobar. The vortex deepens with increasing wind velocity, and consequently it is difficult to reconcile a congestion of extreme velocity of wind and volume of air finding a central vent in these particular cyclones, against a decreasing force of wind and falling barometers, conditions generally prevailing over the central areas of depressions. The evidence is, admittedly, inconclusive, but with a more liberal distribution of anemometers and barographs further light will be thrown on the subject. The workings of the anticyclones on these occasions also appear to support this idea, for once the vortex is formed the wind is maintained with gradually diminishing force until the whole of its excess of pressure has been absorbed, implying that the high pressures, at least in these particular instances, may be the generators and storages of forces that are displayed in some cyclones formed in neutral areas of pressure.

PREVAILING WINDS.

Generally speaking, the prevailing winds in the summer months blow from the north on the coast with an easterly tendency which extends to, and in parts beyond, the highlands, while in the western districts they usually have a westerly tendency.

In winter, the prevailing direction is westerly. Off the southern areas of the State the winds are almost due west, but proceeding northwards a southerly tendency is assumed, while on reaching latitudes north of

Sydney the direction is almost due south. When they reach the north-eastern parts of the State, these winds are deflected in a westerly direction and become merged in the south-east trade winds north of latitude 30 degrees. During the cold months of the year, Australia lies directly in the great high-pressure stream referred to elsewhere, and, as already pointed out, there appears to be an inclination for the high pressure when passing over the continent to be broken up into individual anti-cyclonic circulations moving contra clockwise in the southern hemisphere.

The highest barometric readings, or the deepest anticyclonic area, will be found over the centre of Australia. From this high-pressure area the currents of wind begin to flow by force of gravity to the surrounding regions of lesser pressure, commencing at first with very light breezes flowing almost parallel to the trend of the isobar; but as they gather momentum they become more and more deflected, until on reaching the limit of the propelling force they blow nearly at right-angles to their isobars. This is more especially noticeable when they reach the south-eastern and south-western parts of the continent, for in those regions the well-known V-shaped depressions of the Antarctic low-pressure belt add their attractive inner force to the outward repelling force of the high-pressure areas. The velocity of the wind at these points is thus considerably accelerated, and hence the storms and heavy seas prevailing during the winter months off the Leeuwin, in Western Australia, and on the coast of Victoria. If we follow the path of a current of wind from the centre of a high pressure to its destined goal, viz., the centre of a low pressure, it will be found to describe an evolute curve, or circulate spirally outwards in its early stages, while the reverse is the case in the wind-path of low-pressure or cyclonic systems, the final stages being in the form of an involute curve. In addition to these motions of the wind in high and low pressure areas, there is also a tripping one or deflection earthwards. As winter merges into spring, and spring into summer, the passing of the sun to the south of the equator causes the tropical low-pressure belt to descend polewards, and within close touch of Australia. The high-pressure belt, which in the winter months controls the weather, is likewise forced southwards, and travels over the Southern Ocean, an occasional anticyclone reaching the mainland in the latter end of spring, but very seldom in summer. With the coming southwards of this low-pressure belt, the weather is controlled during the summer months by sub-tropical conditions. The barometers on the mainland being relatively low as compared with the prevailing readings over the western, southern, and eastern ocean surrounding, a reversal of direction in wind currents takes place as compared with that experienced in winter. The depression now existing on the mainland (instead of a high pressure) is still further intensified by the action of the sun on the arid interior, and the winds immediately begin to respond to the low-pressure attractive force, and flow in from the surrounding ocean with a spiral motion. This movement must not be lost sight of, or the cause of the prevailing north-east winds on our coast, as well as the "southerly busters," will not be clearly understood.

With a high-pressure system over the Tasman Sea, another to the west of the Great Australian Bight, monsoonal or tropical low depressions covering the greater part of the mainland, and an Antarctic V-depression to the west of the Tasman Sea, the wind conditions will be as follows:— In the first place, the high pressure lying to the east of New South Wales, conforming to the laws of wind circulation in the southern hemisphere, has a northerly circulation on its western limits. As this boundary lies almost parallel to the trend of the coast-line, northerly winds are found to prevail some distance off the shore; but the circulation is weak, owing to the depleted energy in anticyclones at this time of the year (summer), and it is, therefore, necessary to look elsewhere for some other cause for the strength which prevails in the seasonal north-easters. Continued observation at Sydney shows that these winds are barely perceptible during the morning hours; in fact, up to noon the air is hot and muggy, owing to a listless veering to the north-west bringing back the reflected heat in the air from the country lying between the seaboard and the mountains. But at noon, or shortly afterwards, a decided freshening takes place, until at about 3 p.m. a moderate to fresh breeze is blowing along the seaboard. Later in the day the force of the wind relaxes, until at sundown it ceases entirely. These characteristics may recur day after day; and if such be the case, there is a tendency for the wind to commence earlier, and die away later. If no break occurs in the weather in the shape of a "southerly buster" or a thunderstorm, the north-easter, after blowing continuously for several days, may eventually blow throughout the night. In the early morning there will be a lull, followed by a fog—the precursor of a hot day. The fog is soon dissipated by light westerly winds and blown away to sea, and the wind then veers to the N.W., gradually increases in force, and is accompanied by a rapid rise in the temperature. The thermometer may, indeed, rise as much as 10 or 20 degrees in the course of a few hours, occasionally reaching a maximum of 100 degrees and over. During the evening a thunderstorm may bring temporary relief, only to be followed by a sweltering night and a return of the north-west wind on the succeeding day. The heat conditions will probably be dissipated then by a "southerly buster," lasting possibly till morning. The "southerly buster" rarely persists for any lengthened period after sunrise during the midsummer months; but in late spring or early autumn it may last for several days.

The cause of the initial direction of the north-easters has been alluded to above; but it is in the low-pressure conditions prevailing over the interior that an explanation of their velocity is to be sought. In the early morning the barometers in that region are uniformly level; but with the rising of the sun the air becomes heated, expands, and ascends. A fall in the barometric pressure is the result, while to fill the partial void occasioned by the rising of the heated air, a current sets in from the coastal regions. This indraft to the interior gathers strength in proportion to the increase of the sun's power there, while it diminishes with the declining sun according as the inflow is sufficient to raise the inland pressure to uniformity.

But while this low pressure is fairly constant over the mainland, the anticyclone in the Great Bight is steadily moving eastward over the Southern Ocean, with its accompanying Antarctic depression in advance. When this low pressure has passed to the east of Tasmania, its vortical power is also exercised upon the northerly current blowing off the coast, with the result that the north-easter is deflected into a north-wester, and the winds are drawn from the interior across the coastal regions to supply this new attractive force. The V-depression, impinging on the high pressure to the east of it, and at the same time being compressed by the still advancing high pressure to the west, loses its former obtuse-angular formation, which finally becomes acute. A line bisecting this angle becomes one of demarcation, dividing the northerly circulation in the fore-angle from the southerly circulation in that of the rear. At the same time the entire system is, so to speak, sucked northwards by the continental depression. Hence it follows that in succession to the extremely hot north-westerly winds we experience after a very short lull a burst from the south of even greater velocity than that of the preceding currents. The thunderstorms that frequently precede or accompany the change are probably caused by the violent intermixing of these opposing currents, with their extremes of dryness and humidity, assisted in no small measure by the dust particles pervading the air generally.

THE SEASONS AND TEMPERATURE.

Situated as it is in the temperate zone, New South Wales has four seasons, depending on the annual march of temperature. From a meteorological point of view, these are arranged as follows:—

December, January, and February constitute the Summer.
March, April, and May constitute the Autumn.
June, July, and August constitute the Winter.
September, October, and November constitute the Spring.

January is the hottest and July the coldest month. While the temperature of autumn and spring represents approximately the mean of the whole year, the State affords a variety of temperatures equal to those of Eastern Europe. Thus at Kiandra and Kosciusko one may experience the cold of Scotland, while at Bourke the temperature in summer represents that of some of the districts bordering on the Mediterranean.

Although the summer readings of the thermometer in the western district may be from 10 to 20 degrees higher than those on the coast, the heat is not distressing, and is, in fact, preferred by many people to the moister and more enervating heat of the coastal regions. Excessive heat is only experienced occasionally, and with many summers intervening, its occurrence being in all probability due to a temporary stagnation in the easterly atmospheric drift. Under normal conditions air entering Western Australia with a temperature of from 70 to 80 degrees would only accumulate 20 to 25 degrees by contact with and radiation from the soil during its passage across the continent. Where there is stagnation, however, the air resting over the sandy soils of the interior becomes superheated, and on reaching the western districts of the eastern States shows a temperature sometimes as much as 40 degrees above the normal. Extensive bush fires also are apt to cause a local rise in temperature, and this is due, not only to the actual heat generated, but also to the liberation of combustible matter into the atmosphere, and it has further been affirmed that the presence of a small excess of carbonic acid gas above the normal quantity in the air raises the temperature several degrees.

RAINFALL.

The rainfall of New South Wales is both variable and capricious. Generally speaking, the wet season may be said to extend over the first six months of the year, although occasionally the most serviceable rains come in the spring. The coastal districts are subject to the heaviest falls, ranging from 36 inches in the south to 70 inches in the north. Despite their proximity to the sea, the mountain chains are not of sufficient elevation to cause any great condensation there, so that, with slight irregularities, the average rainfall gradually diminishes towards the western limits of the State, the figures ranging from a mean of about 50 inches on the seaboard to from 10 to 20 inches on the western plains.

The coastal rains come in from the sea with both south-east and north-east winds, being further augmented in the later part of the year by thunderstorms, which cross the mountains from the north-west. The principal precipitating agencies are the Antarctic depressions, the anti-cyclones when travelling in high latitudes, while in the extreme north-east reliable rains are precipitated by the south-east trades.

Inland, north of the Lachlan River, good rains are looked for from the monsoonal disturbances during February and March, although these may come as late as May, and incidentally during the remainder of the year. These monsoonal or seasonal rains are caused by the radiation in the interior during the summer months. The heat, during this period, suspends the moisture accumulated chiefly from the Southern Ocean, and towards the close of the summer and early in autumn the sun's power is reduced and the dew-point reaches the precipitating point.

In the Riverina district, south of the Murrumbidgee generally, and on the south-western slopes, fairly reliable rains, light but frequent, are experienced during the winter and spring months. These are an extension of the rains from South Australia and Victoria, and are carried into New South Wales by south-west winds, off-shoots from the great trade wind belt.

The quantity and distribution of rainfall in New South Wales are dependent on three factors—(1) the energy present in the atmospheric systems prevailing for the time being, (2) the rate of travel of the atmospheric stream, and (3) the prevailing latitudes in which the anticyclones are moving.

The chief agencies for precipitating rainfall are also three in number, viz., Antarctic depressions, monsoonal depressions, and anticyclonic systems. Antarctic depressions are mainly responsible for the good winter rains in Riverina and on the south-western slopes. A seasonal prevalence of this type of weather would mean a shortage of rain on the coast and tablelands, and over that portion of the inland district north of the Lachlan River. A monsoonal prevalence ensures a good season inland north of the Lachlan, but not necessarily in eastern and southern areas. An anticyclonic prevalence results in good rains over coastal and tableland districts, but a shortage of moisture west of the mountains. Equal representation of all three agencies, in conjunction with the main governing features quoted in the preceding paragraph, will be followed by a good season throughout the State.

CHIEF METEOROLOGICAL TERMS USED ABOVE.

Anticyclone.—High-pressure system or area; a region of relatively high barometric pressure, in which the winds blow spirally outward from the centre, or maximum, in the same direction as the movements of watch-hands in the northern, and in the opposite direction in the southern hemisphere.

Cyclone.—Low-pressure system or area: a region of relatively low barometric pressure, in which the winds blow spirally inward towards the centre, or minimum, in the opposite way to the movements of a watch-hand in the northern, and in the same way as the watch-hand movements in the southern hemisphere. There are two types—(*a*) those of small diameter and great intensity, moving westwards, and then turning polewards in inter or sub-tropical regions; and (*b*) those of great diameter, usually moving eastwards in temperate latitudes—those with steep barometric gradients causing storms.

Gradient is difference in pressure per unit of distance.

Isobars.—Lines on maps or charts drawn between places having equal atmospheric pressure.

Isotherms.—Lines drawn between places having the same temperature.

Monsoon.—Primarily the periodical winds of the Indian Ocean and China Sea. The term is now used for any changing wind system which blows from land to sea during the cool season, and from sea to land in the hot season. In eastern Australia the term monsoon denotes a seasonal wind from the N.E.

V-depression.—A low-pressure area lying between two contiguous areas of high pressure. When such a depression passes it usually gives rise to dangerous squalls. Southerly busters indicate the passage of V-depressions.

High-pressure Belt.—The region of high barometers, which in the southern Hemisphere lies between latitudes 30 and 35 degrees.

Tropical Low-pressure Belt.—The region of low barometers, which in the southern Hemisphere lies between the northern parts of Australia and the equator, and in which the S.E. trade winds blow.

Antarctic Low-pressure Belt.—The region of low barometers in the "forty" latitudes to the south of Australia, and in which the westerly trade winds blow.

INDUSTRIAL ARBITRATION.

(*By G. C. Addison, Registrar appointed under the Industrial Arbitration Act.*)

The Course of Legislation.

The question of making provision by law for the settlement of trade disputes between employers and employed, and the consequent regulation of hours, wages, and general conditions of employment in order to avoid the disastrous effects of strikes and lock-outs, was before the Legislature on many occasions prior to the passing of the Industrial Arbitration Act, 1901. It appears for some time to have been confidently hoped that the constitution of Councils, or Boards, to which voluntary resort might be made would answer the purpose, and Mr. (afterwards Sir George) Dibbs and Mr. J. H. Carruthers (the present Premier of the State) introduced bills in 1882 and 1887, respectively, on these lines. It was not, however, until the 31st of March, 1892, that the Trades Disputes and Conciliation Act, a measure which had been introduced by Sir George Dibbs, then Premier of the Colony, became law. It provided for the establishment of State Councils of Arbitration and Conciliation, without compulsion on any party to a dispute to submit a dispute or to abide by the award in a dispute which had been submitted. The Act remained in force for four years, when it lapsed, its provisions having been availed of in but a few instances, although every effort was made by its administrators to make them effective. Mr. G. H. Reid, Premier of the Colony, in 1898, introduced a Conciliation and Arbitration Bill, which was passed in 1899, and is still in force. It gives certain powers to the Minister to direct inquiries and appoint councillors and arbitrators in the case of disputes between employers and employees, but the element of compulsion is absent also from this measure, which has been used on three occasions only.

No further effort was made in the direction of voluntary arbitration, and in 1900 Mr. B. R. Wise, then Attorney-General of the State, introduced a Bill modelled upon New Zealand conciliation and arbitration legislation, compelling a reference of trade disputes to a tribunal constituted by the Bill. The measure having been rejected by the Council, was recast by its framer and again introduced by him in 1901, and as the Industrial Arbitration Act, 1901, passed into law on the 10th of December of that year. It is a temporary measure, continuing in force only until the 30th of June, 1908, and it has since been amended by the Industrial Arbitration (Temporary Court) Act, 1905.

Two Bills to amend the principal measure have been put before Parliament. One was the Industrial Arbitration Act Amendment Act, introduced by Mr. Wise in 1903 in the Legislative Council, and rejected by that body. The other Bill was introduced in the Legislative Assembly by the present Attorney-General, Mr. Wade, on the 22nd September, 1905. It proposes to establish wages boards in respect of specified industries for the regulation of wages, hours, and certain other conditions. The jurisdiction of the Court of Arbitration is preserved, but is not to be exercised unless all parties consent, or no application has been made for a wages board. This Bill has not been proceeded with.

Provisions of Industrial Arbitration Act.

The Industrial Arbitration Act, 1901, is framed upon the New Zealand Industrial Conciliation and Arbitration Act, 1900, which is a consolidation of the original New Zealand Act of 1894, and Acts amending it. There are differences between the two Acts in important particulars—the provision for Boards of Conciliation in the New Zealand measure having no place in the local Act, which, however, provides for enforcing an award by means of a common rule or extension of the terms of the award to persons not parties, a matter not included in the New Zealand Act.

In order to facilitate the operation of the Act upon classes of persons in respect of different industries, provision is made for the grouping of employers and employees in industrial unions, which upon registration under the Act become corporate bodies endowed with perpetual succession and a common seal, with power to acquire and deal with real and personal property, and with other rights, privileges, and responsibilities. The employment of not less than fifty persons entitles an employer or group of employers to registration; and a trade union (which under the Trade Union Act may be composed of seven or more persons) or an association of trade unions is entitled to registration as an industrial union of employees. Certain statutory requirements in respect of the rules of applicant associations must be complied with, and an application to register an industrial union may be refused if another industrial union to which the applicants may conveniently belong has already been registered. The registration of unions may, under certain circumstances, be cancelled on the application of the Registrar, who is an officer appointed under the Act having primary control of the registration and cancellation of unions, and with certain other statutory powers. He also acts as Registrar of the Court of Arbitration.

Collective bargaining between employers and employed may be effected by means of registered industrial agreements, which may be made between an employer or industrial union of employers and an industrial union of employees for a term of not more than three years, an agreement, however, remaining in force beyond the fixed period until the expiration of a month's notice from either party. Industrial agreements are binding upon the unions and their members, and have the same effect, and may be enforced in the same way as an award of the Court.

The Court consists of a President and two members appointed by the Governor for a term of three years, the President being a Judge of the Supreme Court and the members recommended by the industrial unions of employers and employees, respectively. By the Temporary Court Act, 1905, above noticed, the Governor may temporarily constitute the Court by the appointment of a Judge of District Courts as President, and there is further provision for the appointment of a Deputy President, with the same powers of the Court in regard to the enforcement of awards and with the powers of the President in other matters. For three years the Court was composed of a Judge of the Supreme Court (Mr. Justice Cohen) and employers' and employees' representatives, and since the 3rd of July, 1905, a Judge of District Courts (His Honor Judge Heydon) has been President of the Court.

The Court has jurisdiction to hear and determine according to equity and good conscience industrial disputes and industrial matters, and to make orders or awards in pursuance of such hearing and determination. An industrial dispute is defined to be a dispute in relation to industrial matters arising between an employer or industrial union of employers and an industrial union of employees or trade union, including a dispute arising out of an industrial agreement, and the phrase "industrial matters" means:

> "Matters or things affecting or relating to work done or to be done, or the privileges, rights, or duties of employers or employees in any industry, not involving questions which are or may be the subject

of proceedings for an indictable offence; and, without limiting the general nature of the above definition, includes all or any matters relating to—

(*a*) The wages, allowances, or remuneration of any persons employed or to be employed in any industry, or the prices paid or to be paid, therein in respect of such employment;

(*b*) The hours of employment, sex, age, qualification, or status of employees, and the mode, terms, and conditions of employment;

(*c*) The employment of children or young persons, or of any person or persons or class of persons in any industry, or the dismissal of or refusal to employ any particular person or persons or class of persons therein;

(*d*) Any established custom or usage of any industry, either generally or in any particular locality;

(*e*) The interpretation of an industrial agreement."

"Industry" is defined to be:

"Business, trade, manufacture, undertaking, calling, or employment in which persons of either sex are employed, for hire or reward, and includes the management and working of the Government Railways and Tramways, the Sydney Harbour Trust, the Metropolitan Board of Water Supply and Sewerage, and the Hunter River and District Board of Water Supply and Sewerage, but does not include employment in domestic service."

The Court has also subsidiary powers respecting the making of rules, the regulation of procedure, the enforcement of its orders, and other matters. Industrial disputes may be referred to the Court by an industrial union in pursuance of a resolution of its members or in certain cases of its officers, or by the Registrar when the parties thereto or some or one of them are or is not an industrial union. The Court may fix a minimum rate of wages, with provision for the fixing by a tribunal appointed by the Court of a lower rate in the case of persons unable to earn the prescribed minimum. A power, which is referred to later, is given to the Court to grant preference to unionists. With a view to the enforcement of its awards, the Court may fix penalties for breach, grant injunctions, and order cancellation of registration. It may also, with a view to such enforcement, declare that any practice, regulation, rule, custom, term of employment, condition of employment, or dealing whatsoever in relation to an industrial matter shall be a common rule of an industry affected by the proceedings, and may give directions within what limits of area and subject to what conditions and exceptions the common rule shall be binding upon persons in the industry. The Court has power to relieve any person from any obligation imposed by an award. The President has a special jurisdiction under section 12 of the Act, and may order the payment of subscriptions, fines, penalties, and contributions due by members of unions.

The Act also contains an important and what was intended to be an effective provision for the prevention of strikes and locks-out, in clause 34, which enacts that:

"Whoever:

(*a*) before a reasonable time has elapsed for a reference to the Court of the matter in dispute; or

(*b*) during the pendency of any proceedings in the Court in relation to an industrial dispute,

(1) does any act or thing in the nature of a lock-out or strike; or suspends or discontinues employment or work in any industry; or

(2) instigates to or aids in any of the above-mentioned acts,

shall be guilty of a misdemeanour, and upon conviction be liable to a fine not exceeding one thousand pounds, or imprisonment not exceeding two months:

Provided that nothing in this section shall prohibit the suspension or discontinuance of any industry or the working of any persons therein for any other good cause:

And provided that no prosecution under this section shall be begun except by leave of the Court."

INDUSTRIAL UNIONISM.

The Act has given a considerable impetus to organisation, both of employers and employees. At the present time (the end of the year 1906) there are in existence 110 employers' unions, forty-nine of which represent individuals, firms, or companies, the great majority of the remaining unions being groups of persons carrying on the same industry associated together for the purpose of becoming industrial unions under the Act. The number of industrial unions of employees is 122. Some of these represent trade unions which were in existence prior to the passing of the Act, and the others represent trade unions formed subsequent to that time, and, it may fairly be assumed, with the object of registration as industrial unions. In 1902, 112 industrial unions of employers comprised about 2,302 members, and at the end of 1905 the members of 115 unions of employers numbered about 3,044. In 1902, the members of 103 industrial unions of employees numbered about 59,500, and at the end of 1905 the members of 120 unions of employees numbered about 85,000. The registration of twenty-two employers' and twenty-two employees' unions has been cancelled during the past five years. The Act does not prescribe any form of constitution for either unions of employers or employees, and they are at liberty to adopt such rules for their government as they think fit, provided that they contain provision for certain matters set out in a schedule to the Act. The constitutions of the majority of associations of employers are very similar, and are usually no more than sufficient for the conduct of their businesses as industrial unions, but the rules of employees' unions are almost invariably identical with the rules of the trade unions upon which the industrial unions are founded, and consequently embrace provisions regulating working conditions and other matters. These provisions, though useful, and probably necessary to the associations as trade unions, do not appear to have the same justification for their existence as rules of industrial unions, for they are matters which the Court had power to regulate by its awards. The provision of the Act which is aimed at preventing a multiplicity of unions has been above noticed, and a few cases have arisen and been settled by the Registrar or by the Court on appeal, in which it was claimed that applicants for registration could conveniently belong to a union already registered. Except by means of the exercise of the power of cancellation upon application by the Registrar, it would seem that the Court has no direct jurisdiction over the affairs of industrial unions prior to the making of an award to which any such union may be a party. The Court, however, in making an award, or after an award made, may make the inclusion or exclusion of certain rules, or the observance of certain conditions by a union, a condition precedent to the enjoyment by the union of certain benefits in the award, and thus indirectly controls its affairs. If this indirect control of the Court be excepted, the provisions for cancellation of the registration of industrial unions seem to comprise the only effective means under the Act by which persons wrongly prevented from joining unions, or wrongly denied certain rights as members of unions, may obtain redress, and many applications have been made to the Registrar by persons considering themselves to be so aggrieved. In certain of these cases the Registrar has applied to the Court for cancellation.

INDUSTRIAL AGREEMENTS.

The provisions of the Act relating to industrial agreements have been taken advantage of by those engaged in a considerable number of industries. In all, fifty-six employers or employers' unions have entered into sixty-five agreements with forty-five employees' unions, some of these agreements having been renewed or varied by subsequent agreements. The registered agreements represent more than 28,700 employees and more than 1,100 employers, and with the exception of some ten in which notice of intention to terminate was lodged, are probably still in force. Industrial disputes between the parties to some of the agreements had been filed before the making of the agreements, and at the hearing of these disputes the Court, by the consent of the parties, adopted the terms of the agreements as its awards, and also, by consent, made four of these awards common rules in the industries represented. In ten other cases of industrial agreements, no disputes having been filed, the Court, by its orders, made the agreements common rules of the industries. These orders must, however, be considered to be of at least doubtful validity, since a decision of the High Court of Australia in the case of the Master Retailers' Association. The Supreme Court, in that case, having affirmed the jurisdiction of the Court of Arbitration to make these orders, the matter was taken to the High Court on appeal, and that tribunal discharging the order of the Supreme Court held that a judicial determination by the Court of Arbitration is an essential preliminary to its exercise of the powers as to making a common rule conferred by section 37 of the Act, and that, therefore, it had no power to make an industrial agreement a common rule.

OPERATIONS OF THE COURT OF ARBITRATION.

The Court of Arbitration sat for the first time in May, 1902, and since that date has dealt with a large amount of business, although its sitings have been interrupted by the absence of the President on Circuit Court work, by vacations, by the illness of the members, and during the year 1905 by certain difficulties respecting the appointment of a President in succession to Mr. Justice Cohen. The Court sat altogether on 735 days in the hearing of industrial disputes and other matters, and the President sat on many occasions in the special jurisdiction conferred upon him alone. There have been filed 170 industrial disputes. The Court heard and determined sixty-nine of these, and expressed their determinations in awards; ninety were settled, withdrawn, or for other reasons were removed from the list, and there remain at the beginning of the year 1907 eleven disputes awaiting hearing and determination. The hearing of some of the disputes lasted for several weeks, others lasted but a few hours. In seven disputes awards were made on the basis of industrial agreements, and in other cases the parties arrived at agreements in the course of the trial. As many of the awards were made for a term which has expired action has been taken in several instances by the employees' unions to extend the term of the operation of the award, or in the direction of filing a fresh dispute. The present practice of the Court is not to express any term for the operation of the award, which will, therefore, probably endure until abrogated by the Court.

The table at the end of this article shows the classes of persons affected in the case of forty judgments in industrial disputes, and also gives, in brief terms, an indication of the claims and answers filed, and the awards of the Court in respect of wages, hours, apprentices, and preference to unionists. The particulars of the disputes affecting certain of the Northern, Southern, and Western coal-mines are omitted as being rather lengthy and not of general interest. Other awards of minor importance are also omitted.

In addition to industrial disputes the Court has heard and determined several hundred minor, but often very lengthy matters, such as applications by the Registrar for cancellation of registration of unions, proceedings for penalties for breaches of awards, interpretation of awards, and various other matters.

With respect to the principles on which the Court acts in determining disputes, the President has stated that the Court should have in view three main considerations: first, the duty of preventing sweating; secondly, the price of labour; and thirdly, the degree of prosperity existing in the industry in which the dispute occurs, but in the interests of the general public he refused, in dealing with any industry, to take into consideration the fact that the employers were not subject to competition, and could thus by putting up the price of their products conform, without loss, to the terms of an award giving high wages.

Although there is no provision in the Act empowering any person to intervene where the interests of the public are threatened by an order which the Court is asked to make in relation to an industry, the Court will in a proper case consider objections raised by public bodies or private individuals which are material for the Court to consider in the public interest upon the settlement of a dispute.

SLOW WORKERS.

Under the clause in the Act empowering it to provide for a lower rate than the minimum in the case of employees unable to earn that minimum, the Court has usually directed that failing agreement between the employer or employee and the employees' union as to the lower wage, the Registrar shall be the tribunal to determine it. Most of these matters have in practice been settled by the various unions interested, but many have been referred to and determined by the Registrar.

THE COMMON RULE.

The Common Rule, which must be subsequent to and with the view of enforcing an award, is made by the Court to apply to persons other than parties after notice, published in the newspapers, to all known employers engaged in the industry. Persons likely to be affected may lodge notices of objections, and at the hearing of the application may make representations in support of these objections. Unless in such a case as that of a firm or company carrying on a particular business without competitors in the unions, the common rule is almost invariably asked for, and is granted by the Court sometimes in respect of the whole State, and sometimes in respect of a less extensive area. The main object of the common rule is to place all employers engaged in an industry on a similar footing, and thus to equalise conditions of employment, and prevent unfair competition.

THE JURISDICTION OF THE COURT.

Besides the case of the Master Retailers before noticed, the jurisdiction of the Court has been defined by the Supreme Court of the State and the High Court of Australia in certain instances, and much of the uncertainty which formerly prevailed respecting the extent of the powers of the Court has thus been removed. Although the Act provides that the decisions of the Court cannot be appealed from or reviewed, it has been held that if the Court exceeds its jurisdiction, prohibition will lie. The Supreme Court affirming the decision of the President of the Court, decided that "domestic service" in the definition of "industry" above quoted, means service in private houses, and does not include cooks and kitchen hands employed in hotels and restaurants. The High Court held that the words "work done or to be done" in the definition of "industrial matters" above quoted, mean work actually done by the employee or actually provided by the employer to be done, but do not in any way refer to the quantity of work which the employer is to provide for his employees. "If it were so," said the Chief Justice, Sir Samuel Griffith, "the Arbitration Court would have a new power not suggested by any words of the Act, a power to regulate the carrying on of any industry at large—that is, to require the employer to employ a particular number of employees, and to provide a sufficient quantity of work for them, and enable them to earn a maximum or minimum wage, conditions which it would be impossible for an employer to fulfil unless he had sufficient capital." It was further held in the same case that the jurisdiction of the Court is exclusively confined to matters in which the mutual relationship of employer and employee is involved. After their relationship has ended, the employer's common law right to dispose of his own time as he thinks fit cannot be interfered with by the Court. In subsequent cases it has been laid down that where the relationship of employer and employee has ceased, the Court has no jurisdiction to order employees to return to work. "It appeared from these decisions of the higher Courts," said the President in a recent judgment, "that the Court was not to attempt to deprive any person of his common law rights, except so far as the Act clearly gives it power to do so, and also that the Court is to confine its attention to the relationship of employer and employee, and avoid anything in the nature of a general regulation of the industry or an interference with the rights of the employer to organise and manage his own business. These principles though actually applied to define the jurisdiction of this Court should also, in my opinion, be applied by this Court in dealing with questions within its jurisdiction." The High Court has held that the Court has no jurisdiction to entertain an application by an industrial union of employees to have the conditions of employment in the industry regulated by the Court unless there is in existence an industrial dispute as to these conditions between employees who are members of the union and their employers. This decision, as interpreted by the President, has caused a number of cases filed to be withdrawn, as evidence of a dispute could not be proved, and steps have in many cases been taken to obtain better conditions by the initiation of fresh disputes. The Court has no jurisdiction to entertain maters which, though submitted by an employee's union, have not been the subject of a demand by the employees. The Court has jurisdiction in a dispute between several employees, although at the time of the hearing all but one employee had left their employment, and that one had been given a rise of wages. It has been recently held by the Supreme Court that the Court of Arbitration has no power to extend the duration of an award.

PREFERENCE TO UNIONISTS.

The only provision in the Act dealing with preference to members of industrial unions is that by which the Court is empowered to direct that as between members of an industrial union of employees and other persons offering their labour at the same time, members shall be employed in preference to such other persons, other things being equal. In an early case the Court of Arbitration held that the power to direct preference is not exclusively confined to the above case, but that under the general words included in the definition "industrial matters," the Court had power to direct that a non-unionist seeking employment, should, as a condition precedent to his obtaining it, agree to join the union within a specified time after his engagement. This decision, however, has been overruled by the recent judgments of the Supreme Court in the Master Carriers' case. The Supreme Court and High Court also held in the same case that the Court has no power to embody in the order for preference a direction that an employer requiring labour should, wherever reasonably practicable, having regard to existing exigencies, notify the secretary of the employers' union of the labour required.

The views of the present President of the Court as to the principle on which the question of preference to unionists should be dealt with have been explained in the following terms:—"The Legislature has simply given this Court the power to grant preference to unionists, without any direction as to how to exercise the power. By giving the power, and leaving it to the discretion of the Court to exercise it or not, it has, it seems to me, indicated that in some cases preference should be granted and in others refused. It follows that all general grounds, on which it would always be granted, or always refused, are impliedly condemned. I have no right, for instance, to grant it on the ground that unionism is a good thing, and should be promoted, for that would lead to granting it in every case, and if the Legislature had held that view they would have made preference compulsory. Neither have I any right to refuse it on the ground that it must operate either to create an industrial monopoly or to force the industrial classes into bodies which are political as well as industrial, for that would lead to refusing it in every case, and if that had been the view of the Legislature they would not have opened the door to preference at all. In this position the only principle which I can discover is that which was explained in the Sawmillers' case, viz., that, as far as possible, the same results must be given in the award as would have been arrived at by the parties themselves." It may be mentioned that the employers' representative has opposed the granting of preference in every case, and the employees' representative has invariably favoured it.

It is interesting to notice that the granting of preference to members of the employees' union was agreed to in thirty-three of the industrial agreements which have been filed with the Registrar, in twenty-nine agreements the matter of preference was not mentioned, and in three agreements it was provided that preference should not be granted.

STRIKES.

Since the passing of the Industrial Arbitration Act the newspapers have reported between thirty and forty instances of cessation of work by bodies of employees in consequence of some disagreement with their employers. It may be that most of these occurrences were strikes within the meaning of the Act, which defines a "strike" to be "the cessation of work by a body of employees acting in combination, done as a means of enforcing compliance with demands made by them or other employees on employers," but in the absence of proper evidence it would be hazardous to assert that any of them constituted an offence under section 34 of the Act, quoted in an earlier part of this article. Although leave to prosecute for an offence under that section was granted by the Court in a number of cases, prosecutions were actually instituted in connection with two only of the "strikes," in one case against one person, in the other against several persons. In the former case a conviction was obtained, and the defendant was fined. With few exceptions these "strikes" were by small bodies of men, and although they caused, in some instances, considerable local inconvenience, they were usually settled after the men were absent for comparatively short periods. Eighteen "strikes" were in connection with employees in coal-mines, and the remainder were instances of cessation of work by tailoresses, street-sweepers, tug-hands, coal-lumpers, firemen and deck-hands, wharf labourers, shearers, shipwrights, bakers, and tip-carters; the reasons assigned for the action taken by the employees being reported variously to be: Refusal to concede better rates of pay or improvement in other conditions of work, employment of non-unionists, lock-out by the employer, intrusion of persons of other trades on work claimed by the persons ceasing work, refusal to reinstate dismissed employees, and wrongful promotion of certain employees. The shearers' so-called "strike" in 1902, for increased rates of pay, was in most cases merely a refusal to go to work on the terms offered by the sheep-owners, and an attempt to prevent others from doing so. It affected large bodies of men, and the action taken failed to secure, except, perhaps, in a few instances, the increased rates demanded, and shearing operations were ultimately peacefully proceeded with. The next alleged "strike" which arrested general public attention was in connection with certain coal-mines in the Teralba district, near Newcastle. The Court had made an award which provided for the regulation of the rates of pay in accordance with the selling price of coal. When the miners (some 200) found that the selling price was a low one, and, consequently, that the wages would be reduced, they ceased work early in January, 1904, and remained out for nearly two months, although advised to go to work by officials of the Colliery Employees' Federation, an industrial union of which they were members. The proprietors of one of the collieries took proceedings in the Court of Arbitration against the Colliery Employees' Federation for the recovery of a penalty of £200 for breach of the award referred to, but the Court held that there being no express direction in the award that work should continue until the employment was mutually terminated after the customary notice of fourteen days the action of the men did not constitute a breach of the award. Leave to prosecute certain of the miners under the penal clauses of the Act was granted by the Court, but these proceedings were dropped when the men went back to work.

Early in 1905 the wheelers at several collieries in the Newcastle district ceased work on account of a reduction in the wheeling rate, and the mines were thrown idle. One or two representative wheelers from each mine and certain miners, were proceeded against under section 34 of the Act, and several of them were committed for trial. Various contentions were raised at the trial, and in two cases the presiding judge directed an acquittal, two cases only being ultimately left to the jury, which disagreed in one and acquitted the defendant in the other.

It has been claimed on behalf of employees that the existence of the Act has had the effect of preventing several large strikes, especially among the coal miners in the Newcastle district and among waterside workers.

The statement given in the following pages is a summary of wages and other conditions of labour in certain industries, prior to and under awards of the Court of Arbitration.

The following are explanations of the terms used in the statement:—

Claim.—Claimant's claim in the industrial dispute.
Answer.—Respondent's answer in the industrial dispute.
Award.—Award of the Court of Arbitration in the dispute.
Apprentices.—Proportion of apprentices to journeymen.
Preference.—Preference of employment to members of the claimant union.

A.—Industries in which the

Industry and Class of Employee.	Average Weekly Wage paid prior to Award.	Minimum Wage.			Hours.		
		Claim.	Answer.	Award.	Claim.	Answer.	[illegible]
Bread-carters	42/-	45/-	42/-	45 -	54 hours per week of 7 days, including Sunday, and 1 hour per day for meals.	Disputed.	[illegible]
Confectioners	50/-	55/-	50/-	50/-	48	48	[illegible]
Hotel, Club, Restaurant and Caterers' Employees—							
Cooks...	20/- to 30 - and board.	30/- to 60/- and board.	20/- to 30/- and board.	25/- to 45/- (a)	60	71½	[illegible]
Pantrymen ... Kitchen Hands ...	12/- to 15/- and board.	25/-	12/- to 15 -	20/-	60	76	[illegible]
Pastrycooks—					48 (6 days of 8 hours).	48, and no limitation as to daily hours.	[illegible]
1st hands	60/-	60/-	Admitted.	60/-			
2nd „	50/-	50/-	„ ...	50/-			
3rd „	30/-	30/-	„ ...	30/-			
Cutters and Trimmers—							
1st Trimmer ...	50/-	60/-	50/-	50/-	48	48	[illegible]
2nd „ ...		40/-	Disputed				
Tailors—							
Male Labour ...	50/-	55/-	Disputed	50/-	48	Disputed	[illegible]
Female „	32/-	40/-	......	22/6 & 27/6	....	......	[illegible]
Tailoresses—							
Tailoresses	20/-	25/-	Disputed	20/-	44	Disputed	[illegible]
Coat Machinists ...	25/-	35/-	„	25/-	44	„	[illegible]
Furniture Makers—							
Mattress Makers	48/-	52/-	50/-	48/-	48	48	[illegible]
French-polishers		54/-	48/-				
Cabinet-makers, Wood-turners & Carvers, Chair & Frame-makers, Upholsterers ...	52/-	60/-	52/-	52/-			
Carpet-layers ...	55 -	60/-	52/-	50/-			
Carpet-cutters ...		80 -	61/-	60/-			

made Common Rules.

Apprentices.			Overtime.	Preference.	Remarks.	Industry and Class of Employee.
aim.	Answer.	Award.				
......	......	......	1/- per hour after 60 hours are worked.	Claimed; opposed; granted.	Hours, exclusive of stable work, &c., and not to exceed 60 hours weekly.	Bread-carters.
3 men, fraction eof.	......	1 to 3 men, or fraction thereof.	....	Claimed; granted.	....	Confectioners.
......	......	....	Chef, 1/- per hour; 2nd cook, 9d; 3rd cook, kitchen hands, and pantrymen, 6d. per hour. Where weekly wage is more than £2 10s., overtime at time and a half.	Claimed; opposed; granted.	(a) Where business conducted on 6 days only, reduce hours by 5. Board 10/-, and lodging 5/- extra, if not provided by employer.	Hotel, Club, Restaurant and Caterers' Employees— Cooks. Pantrymen. Kitchen Hands.
......	......	1 to 3 men or fraction thereof.	1st 3 hours over 48, ordinary rates; after 1st 3 hours, time and a half.	Claimed; admitted; granted.	....	Pastrycooks— 1st hands. 2nd ,, 3rd ,,
or frac- there-	......	1 to 3, or fraction thereof.	1st 2 hours, time and a quarter; thereafter, time and a half.	Claimed; admitted; granted.	....	Cutters & Trimmers— 1st Trimmer. 2nd ,,
or frac- there-	Disputed	1 to 4, or fraction thereof. Female apprentices, 1 to every 3 journeywomen, or fraction thereof.	1st 2 hours, time and a quarter: thereafter, time and a half; piece workers 3d. per hour extra for 1st 2 hours, 6d. per hour thereafter.	Claimed; opposed: granted.	....	Tailors— Male Labour. Female ,,
or frac- there-	......	1 to 2	Time and a half	Granted ...	Award by consent ...	Tailoresses— Tailoresses. Coat Machinists.
or frac- there-	1 to 3, or fraction thereof.	1 to 3, or fraction thereof.	1st 3 hours, time and a half; after 3 hours, and Sundays and holidays, double time.	Claimed; opposed; granted.	....	Furniture Makers— Mattress Makers. French Polishers. Cabinet-makers, Wood-turners and Carvers, Chair and Frame-makers, Upholsterers. Carpet-layers. Carpet-cutters.

A.—INDUSTRIES in which the Awards

Industry and Class of Employee.	Average Weekly Wage paid prior to Award.	Minimum Wage.			Hours.		
		Claim.	Answer.	Award.	Claim.	Answer.	Award.
Sawmill & Timber Yard Employees—							
Skilled Labour ...	48/-	From 48/- to 66/-	7/- to 8/- per day.	1/1½ per hour.	48	48	48
Experienced Labour	42/-	50/- & 55/-	5/- per day	10½d. per hour.			
Ordinary Labour (a)	36/-	45/-	5/6 and 6/- per day.	10d. per hour.			
" " (b)				9½d. per hour.			
" " (c)				9d. per hour			
Casual " ...	......	1/3 per hour	10d. per hour.	1/- per hour			
Painters—							
Competent Workmen or Specialists ...	51/4	1/8 per hour	1/1½ per hour.	1/2 per hour	44	44	44
Under-rate men ...	......	....	10½d. per hour.	10½d. per hour.			
Marble and Slate Workers—							
Masons	54/-	10/- per day	9/- per day	1/1½ per hour.	48	48	48
Polishers	42/-	8/- "	7/- "	10½d. per hour.			
Machinists	5/-	9/- "	7/6 "	11½d. per hour.			
Broom Workers—							
1st Sorters	36/-	45/-	42/-	42/- and 45/-	48	48	48
2nd "		36/-	30/-	35/-			
Handle Painters ...	25/- to 40/-	45/-	25/- to 40/-	40/-			
Bookbinders and Paper-rulers.	52/-	60/- to 70/-	52/-	52/	48	48	48

rere made Common Rules—*continued.*

Apprentices.			Overtime.	Preference.	Remarks.	Industry and Class of Employee.
Claim.	Answer.	Award.				
1 to 2	No restriction.	No restriction.	1st 2 hours, time and a quarter; thereafter until midnight, time and a half; after midnight and on holidays, double time.	Claimed; opposed; granted.	....	Sawmill and Timber Yard Employees— Skilled Labour. Experienced Labour. Ordinary Labour (a) „ „ b „ „ (c) Casual „
to 4, or fraction thereof.	Admitted	1 to 4, or fraction thereof.	1st 2 hours, time and a quarter; next 4 hours, time and a half; midnight to 8 a.m., double time; Christmas Day, Good Friday, and Sundays, double time; other holidays, time and a half.	Claimed; admitted; granted.	....	Painters— Competent Workmen or Specialists. Under-rate men.
to 4, or fraction thereof. to 8, or fraction thereof. 1 to 1	1 to 4, or fraction thereof.	1 to 4, or fraction thereof.	....	Claimed; opposed; granted.	....	Marble and Slate Workers— Masons. Polishers. Machinists.
....	......	...	Time and a-half; piece-workers, ¼d. per hour extra.	Claimed; opposed; granted.	....	Broom Workers— 1st Sorters. 2nd „ Handle Painters.
to first 4, 2 to 6; thereafter 1 to 3.	1 to 3	1 to 3, or fraction thereof.	1st 2 hours, time and a quarter; up to midnight, time and a half; thereafter double time. Sunday, Christmas Day, Good Friday, and 8-hours Day, double time; other holidays, time and a half.	Claimed; opposed; granted.	....	Bookbinders and Paper-rulers.

A.—Industries in which the

Industry and Class of Employee.	Average Weekly Wage paid prior to Award.	Minimum Wage.			Hours.	
		Claim.	Answer.	Award.	Claim.	Answer.
Journeymen Farriers—						
Floormen	48/-	50/-	1/- per hour	47 6	48	48
„ (casual)	......	....	......	1/- per hour		
Firemen	60/-	60/-	1/3 per hour	57/6		
„ (casual) ...	......	....	......	1/2½ per hour		
Saddle and Harness Makers.	48/-	50/-	Object to minimum wage, except for old or incompetent men.	48/-	48	52
Brickmakers and Brick-carters—						
Burners	48/-	10/- per day...	Disputed	1/- per hour	8 hours per day	Disputed
Setters	48/-	1/3 per hour		1/- „ ...		
Drawers	48/-	1/3 „ ...		1/- „ ...		
Machine-men ..	48/-	1/- „ ...		10½d. „ ...		
Assistant Machine-men.	38/-	10d. „ ...		9½d. „ ...		
Loftmen	42/-	1/- „ ...		10½d. „ ...		
Panmen	44/-	1/1 „ ...		11d. „ ...		
Men in charge of Winding Gear.	42/-	1/- „ ...		11d. „ ...		
Shooters	48 -	1/4 „ ...		1/1 „ ...		
Getters	48/-	1/4 „ ...		1/- „ ...		
Fillers	48/-	1/3 „ ...		1/- „ ...		
Yardmen	36/-	1/- „ ...		9d. „ ...		
Pressers	48/-	1/6 „ ...		1/- „ ...		
Pressers' Assistants	40/-	1/3 „ ...		10d. „ ...		
Man cutting off ...	40/-	1/- „ ...		10d. „ ...		
Feeders, Off-bearers, and Soakers.	42/-	1/1 „ ...		10½d. „ ...		
Pottery and Terra Cotta Work—						
Pipe Machine Workers.	48/-	1/3 „ ...		1/- „ ...		
Dressers, Trimmers, & Machine hands.	42/-	1/1½ „ ...		10½d. „ ..		
Cutters and Floor-men.	44/-	1/3 „ ...		10½d. „ ...		
Drawers & Setters	44/-	1/3 „ ...		10½d. „ ...		
Pipe-carriers and Yardmen.	40/-	1/- „ ...		10½d. „ ...		
Youths acting as Yardmen.	25/-	10½d. „ ...		6½d. „ ...		
Burners	42/-	1/1½ „ ...		10½d. „ ..		
Assistant Burners	......	1/- „ ...		......		
Machine Feeders and Ring Oilers.	40/-	11d. „ ...		10½d. „ ...		
Moulders and Pressers.	48/-	1/3 „ ...		1/- „ ...		
Panmen and Clay-makers.	48/-	1/3 „ ...		1/- „ ...		
Pitmen	......	1/1½ „ ...	Disputed	......		
Carters	......	8/4 to 12/- per day.		1 horse, 40/- per week: 2 horses, 45/-; 2/6 each extra horse.		
Tip-carters—						
Temporary work ...	......	13/- per day	11/-	11/-	....	......
Permanent „ ...	......	11/- „				

were made Common Rules—*continued.*

Apprentices.			Overtime.	Preference.	Remarks.	Industry and Class of Employee.
Claim.	Answer.	Award.				
1 to 3	Disputed	1 to 3, or fraction thereof.	....	Claimed; opposed; granted.	....	Journeymen Farriers— Floormen. " (casual). Firemen. " (casual).
1 to 3, or fraction thereof.	Object to limitation.	1 to 3 in saddlery branch: 1 to 2 in other branches.	6 a.m. to 8 a.m., and 6 p.m. to 8 p.m., time and quarter; 8 p.m. to 6 a.m., time and a half; holidays and Sundays, double time; piece-workers, 3d. per hour extra.	Claimed; opposed; granted.	....	Saddle and Harness Makers.
....	......	......	1st 1¼ hours, time and a quarter; thereafter, time and a half; Sunday, double time, except for Burners.	Claimed; admitted; granted.	....	Brickmakers and Brick-carters— Burners. Setters. Drawers. Machine-men. Assistant Machine-men. Loftmen. Panmen. Men in charge of Winding Gear. Shooters. Getters. Fillers. Yardmen. Pressers. Pressers' Assistants. Man cutting off. Feeders, Off-bearers, and Soakers. Pottery and Terra Cotta Work— Pipe Machine Workers Dressers, Trimmers, and Machine hands. Cutters and Floormen. Drawers and Setters. Pipe-carriers and Yardmen. Youths acting as Yardmen. Burners. Assistant Burners. Machine Feeders and Ring Oilers. Moulders and Pressers. Panmen and Claymakers. Pitmen. Carters.
......	.....	......	....	......	....	Tip-carters— Temporary work. Permanent.

A.—Industries in which the Awards

Industry and Class of Employee.	Average Weekly Wage paid prior to Award.	Minimum Wage.			Hours.		
		Claim.	Answer.	Award.	Claim.	Answer.	Award.
Trolley, Draymen, and Carters— Horse-driver—							
Heavy (1)	......	42/.	36/-	40 -	57	77	57 (d)
,, (2)	......	48/-	40/-	45/-			
Light	......	....	......	40/-			
Undertakers' Employees—							
Shopmen	......	50/-	45/-	47/6	60	"Cannot be arranged."	54
Yard and Coachmen	......	42/-	42 -	45 6	60		60
Sydney Wharf Labourers (dispute with Sydney Stevedores' Wool Dumping and Lighterage Association).	1/- an hour	1/3 per hour	1/-	1/3	44	44	44
Broken Hill Miners—							
Shaftsmen	......	12/- per day	That existing wages be reduced 10 %.	Existing wages.	46	Disputed	Existing hours to be continued.
Ordinary Miners ...	......	10/- ,,					
Surface Employees over 16 years of age.	......	9/- ,,					
Plasterers	......	1/3 per hour; 1/4½ when engaged on sewer, tunnel, and shaft work; foremen, 1½d. an hour extra.	1/-per hour; sewer and tunnel work, 1/1; foremen's wages to be fixed by employer.	1/3 per hour; sewer, tunnel, and shaft work, 1/4½.	48	48	48
Tug Boat Employees v. Brown—							
Mates	......	£9 per month and found.	£8 and find them-selves.	£7/10/- and found.	Firemen, 4 hrs. on and 8 off. All others, 60 hours per week.	As required by employer	......
Firemen	......	£9 ,,	£9 and find them-selves.	£8/10/- and found.			
Cooks...	......	£7 ,,	£5 and be found by crew.	£5/10/- and found.			
Deck Hands ...	......	£7 ,,	£6 and find them-selves.	£6 and found.			
Carpenters and Joiners (work on shore).	54/-	1/4½ per hour	1/1½	1/3	44	48	48

were made Common Rules—*continued.*

Apprentices.			Overtime.	Preference.	Remarks.	Industry and Class of Employee.
Claim.	Answer.	Award.				
....	......	......	1st 2 hours, time and a quarter; thereafter, time and a half.	Claimed: opposed; granted.	(d) Exclusive of meal hours and stable work; 2/6 per week for each extra horse above 2.	Trolley, Draymen, and Carters— Horse-driver— Heavy (1). „ (2). Light.
....	......	......	1/- per hour; Christmas Day and Good Friday, 2/- per hour.	Claimed; opposed; granted.	....	Undertakers' Employees— Shopmen. Yard and Coachmen.
....	......	......	Special overtime rates, 1/9 to 5/- per hour; loading frozen meat, 3/- per hour all through ordinary working hours.	Claimed; opposed; granted.	....	Sydney Wharf Labourers (dispute with Sydney Stevedores' Wool Dumping and Lighterage Association).
....	......	......	....	Granted	....	Broken Hill Miners— Shaftsmen. Ordinary Miners. Surface Employees over 16 years of age.
1 to every 3 journeymen.	Disputed	1 to every 3 journeymen or fraction thereof, but not more than 4 in all.	Time and a quarter for first two hours, time and a half thereafter.	Claimed: opposed; refused.	....	Plasterers.
....	......	......	* See Note.	Claimed; opposed; granted.	Note Judgment—If men find themselves, £1/19/- a month extra to be paid.	Tug Boat Employees v. Brown— Mates. Firemen. Cooks. Deck Hands.
....	......	......	First 2 hours, time and a quarter; time and a half thereafter; holidays, double time.	Claimed; opposed; refused.	Special provision for under rate men.	**Carpenters and Joiners (work on shore).**

* In each port one boat's crew may be kept back after 6 p.m. on each day to wait for orders. If any of the other crews are kept back to wait for orders after 6 p.m., or after the time that their boat returns, if it returns after 6 p.m., each member of the crew shall be paid not less than 1s. an hour overtime after 6 p.m., or after such return, when later than 6 p.m., as the case may be.

A.—Industries in which the Awards

Industry and Class of Employee.	Average Weekly Wage paid prior to Award.	Minimum Wage.			Hours.		
		Claim.	Answer.	Award.	Claim.	Answer.	Award.
Milk and Ice Carters and Dairymen's Employees—							
Milk Carters ...	......	45/-per week, unless delivering under 30 gallons per day, when wage shall be 40/-	45/- per week when delivering 45 gallons or more; under that 40/-	If delivering 40 gallons or more per day, 45/-; under 40 gallons, 40/-	60	Unlimited	60
Special Delivery Carters.	......	30/-	Over 21 years of age, 30/-	Over 21 years of age, 30/-	56	56	56
Drivers of Double Teams.	......	47/6	45/-	45/-	56	56	56
Milk Weighers—							
Leading Hands ...	......	45/-	40/-	45/-	48	56	50
Ordinary Hands...	......	42/-		40/-			
Milk Receivers—							
Leading Hands ...	......	45/-	40/-	45/-	48	56	48
Ordinary Hands...	......	42/-		40/-			
Grooms, Yardmen, &c.	......	42/-	40/-	40/-	56	56	53
Ice Carters—							
Ordinary Hands...	......	45/-	37/6	42/-	54 per week of 6 days.	60 per week of 7 days.	57 per week of 6 days
2-horse Drivers, delivering in bulk.	......	45/-	40/	42/-			
1-horse Drivers, delivering in bulk.	......	42/-	37/6	40/-			
Casual Labour ...	......	1/- per hour; 1/6 per hour on Sundays and statutory holidays.	Admitted	1/- per hour; 1/6 per hour on Sundays and statutory holidays.	....	......	......
Wire Mattress Makers—							
Weavers	....	48/-	Disputed.	48/-	48	Admitted.	48
Bench Hands, Tacker-on, Plyer-up, and Fitter.	....	45/-		45/-			
Tug-boat Employees—							
Mates	....	£7/10/- per month and found.	£8 and find themselves.	£7/10/- and found.	Firemen 4 hours on and 4 hours off, except where 3 men are employed, then the hours to be 4 on and 8 off. Deck hands, when at sea, 4 hours on and 4 off.	Firemen should work in accordance with existing conditions. Deck hands should work when required by the employer.	....
Firemen	....	£8/10/- per month and found.	£9 and find themselves.	£8/10/- and found.			
Cooks..........	....	£5/10/- per month and found.	£5/10/- and found by crew.	£5/10/- and found.			
Deck Hands	....	£6 per month and found.	£7 and find themselves.	£6 and found.			
Carpenters and Joiners (employed in Ship-building).	55/-	1/4½ per hour	1/3	1/3; Leading hands, 1/- per day extra.	44	44	48

e made Common Rules—*continued.*

Apprentices.			Overtime.	Preference.	Remarks.	Industry and Class of Employee.
Claim.	Answer.	Award.				
....	......	......	....	Claimed; admitted; granted.	Award made a Common Rule, subject to certain conditions and exceptions.	Milk and Ice Carters and Dairymen's Employees— Milk Carters.
....	......	......	9d. per hour; Sundays and statutory holidays, 1/.	......	....	Special Delivery Carters.
....	......	......	1/- per hour; Sundays and statutory holidays, 1/6.	......	....	Drivers of Double Teams.
....	......	......	1/- per hour ...	......	....	Milk Weighers— Leading Hands. Ordinary Hands.
....	......	......	1/- per hour ...	......	....	Milk Receivers— Leading Hands. Ordinary Hands.
....	......	......	1/- per hour ...	......	....	Grooms, Yardmen, &c.
....	......	......	1/- per hour ...	......	....	Ice Carters— Ordinary Hands. 2-horse Drivers, delivering in bulk. 1-horse Drivers, delivering in bulk.
....	......	......	....	......	....	Casual Labour.
› 3, or ction reof.	1 to 3, or fraction thereof.	1 to 3, or fraction thereof.	Time and a-half after prescribed hours and for Sundays and holidays.	Claimed opposed; granted	Award by consent.	Wire Mattress Makers. Weavers. Bench Hands, Tacker-on, Plyer-up, and Fitter.
....	....	....	....	Claimed oppose ; granted.	Note: Judgment—If men find themselves, £1/19/- a month extra to be paid.	Tug boat Employees— Mates. Firemen. Cooks. Deck Hands.
......	......	......	Time and a half up to 10 p.m., then double.	Claimed; admitted; granted.	Mort's Dock and Engineering Co., Ltd., excepted so far as relates to time of ceasing work by employees.	Carpenters and Joiners (employed in Shipbuilding).

A.—INDUSTRIES in which the Awards

Industry and Class of Employee.	Average Weekly Wage paid prior to Award.	Minimum Wage.			Hours.		
		Claim.	Answer.	Award.	Claim.	Answer.	Award.
Sydney Coal-lumpers—							
Coal-lumpers (generally).	......	1/9 per hour	1/6	1/6	7 a.m. to 6 p.m., Mondays to Fridays; 7 a.m. to 1 p.m., Saturdays.	6 a.m. Mondays to 6 p.m. Saturdays.	6 a.m. Mondays to 6 p.m. Saturdays.
Winchmen (special)	......	„	£10 a month	£10 a month & found.			
Newcastle Wharf Labourers.	......	1/- per hour.	48/- per week.	1/- per hour.	44	60	50

B.—INDUSTRIES in which Awards

Industry and Class of Employee.	Average Weekly Wage paid prior to Award.	Minimum Wage.			Hours.		
		Claim.	Answer.	Award.	Claim.	Answer.	Award.
Employees of Australian Gaslight Company—							
Men in charge of Machinery.	......	8/6 per shift	Disputed	* See Note.	8-hour shifts	......	8-hour shifts.
Truck Fillers ...	......	8/- „			„	......	„
Carbonizing Dept...	......	9/6 „			„	......	„
Yardmen	......	7/6 „			„	......	„
Tanners, Curriers, and Leather-dressers—							
Curriers	45/-	50/- per week	45/-	45/-	48	48	48
Table hands ..	36/	47/6 „	36/-	36/-			
Rollermen	41/-	48/- „	40/-	40/-			
Beamsmen			42/-	42/-			
Unhairers and Scudders.	36/-	45/- „	36/-	38/-			
Strikers	40/-	42/- „	40/-	40/-			
Yardsmen, Shedsmen, and Lime Jobbers.	34/-	42/- „	34/-	36/-			
Sydney and Manly Ferry Employees—							
Firemen	......	56/-	48/6	50/9 per wk.	56 weekly	120 fortnight.	60 per weel
Deck Hands, &c. ...	......	42/-	35/-	36/- „	60 „	„	120 per fortnight
Mates and Greasers	......	49/-	Disputed	49/- „	60 „	„	
Youths	......	25/-	15/- to 25/-	15/- to 20/-	60 „	„	
Watchmen	......	42/-	35/-	40/-	60 „	„	
Sydney Wharf Labourers (dispute with Inter-State and Coastal S.S. Owners' Associations).	......	From 7 a.m. to 5 p.m., 1/3; overtime, 1/9; other rates, from 1/9 to 5/-	From 7 a.m. to 5 p.m., 1/-; overtime, 1/3; other rates, from 1/6- to 4/-.	From 7 a.m. to 5 p.m., 1/1½; overtime, 1/4; other rates, 1/6 to 3/-.	Ordinary, 8 a.m. to 5 p.m.; Saturday, 8 a.m. to 12 noon.	7 a.m. to 5 p.m., including Saturday.	7 a.m. to 5 p.m. daily.

* From January 1 to December 31, 1905:—Firemen, 9/3 per day of 8 hours: Coke Trimmers, 8/3: Machine Men, 8/9; Oilhouse Operators, 8/9; Oilhouse Assistants, 8/-; Boilermen (Mortlake), 8/9; Drivers (Mortlake), 8/9; Sulphate Men, 7/9. From January 1, 1906, until expiration of Award:—Firemen, 9/6; Coke Trimmers, 8/6: Machine Men, 9/-; Oilhouse Operators, 9/-: Oilhouse Assistants, 8/3: Boilermen, 9/-; Drivers, 9/-; Sulphate Men, 8/-. During whole period of currency of Award:—Yardmen, 7/-: Coal Trimmers, 7/6; Boilermen, Sydney, 9/-; Drivers, Sydney, 9/-.

were made Common Rules—*continued.*

Apprentices.			Overtime.	Preference.	Remarks.	Industry and Class of Employee.
Claim.	Answer.	Award.				
....	......	......	Other rates, from 3/- to 5/- per hour.	Claimed, admitted, & granted upon application for Common Rule.	....	Sydney Coal-lumpers— Coal-lumpers (generally). Winchmen (special).
....	......	......	1/6 per hour, except after 4 p.m. Saturday and when ordered out at midnight on Sunday, then 2/- per hour.	Claimed; opposed; granted.	Made a Common Rule subject to certain conditions and exceptions as appear upon comparison of amended schedule with the award.	Newcastle Wharf Labourers.

were not made Common Rules.

Apprentices.			Overtime.	Preference.	Remarks.	Industry and Class of Employee.
Claim.	Answer.	Award.				
....	......	......	Sundays and holidays, time and a half.	Claimed; opposed; granted.	....	Employees of Australian Gaslight Company— Men in charge of Machinery. Truck Fillers. Carbonizing Dept. Yardmen.
1 to 3, or fraction thereof.	Admitted	When 1 man only employed, 1 apprentice; otherwise, 1 to 3	Time and a half; Sundays, Good Friday, Christmas Day, and Eight-hour Day, double time.	Claimed; opposed; granted.	....	Tanners, Curriers, and Leather-dressers— Curriers. Table Hands. Rollermen. Beamsmen. Unhairers and Scudders. Strikers. Yardsmen, Shedsmen, and Lime Jobbers.
....	......	......	Time and a quarter first 2 hours, time and a half thereafter for all hours over 70 in one week, or 120 in a fortnight.	Claimed; opposed; granted.	....	Sydney & Manly Ferry Employees— Firemen. Deck Hands, &c. Mates and Greasers. Youths. Watchmen.
....	......	......	....	Claimed; opposed; granted.	....	Sydney Wharf Labourers (dispute with Inter-State and Coastal S.S. Owners' Associations).

B.—INDUSTRIES in which Awards

Industry and Class of Employee.	Average Weekly Wage paid prior to Award.	Minimum Wage.			Hours.		
		Claim.	Answer.	Award.	Claim.	Answer.	Award.
Brewery Employees—							
Tower, Mill, and Tun-room Hands.	44/-	45/- per week.	Disputed.	(*b*) Tower, mill, and tun room hands, £2 4/- per wk.; cellar hands, 42/-; yardmen, 40/-; malt-hse. hands, 40/-; packers, 40/-; fillers and corkers, 36/-; brushers and shoters, 36/-; boys, 10/- per week, and 2/6 rise every 6 months.	Monday to Friday, 8½ hours per day; Saturday, 5½ hours. 48 hours in all.	Disputed.	(*b*) 48 hours per week, viz., Monday to Friday, 8½ hours per day; Saturday, 5½ hours.
Cask Washing or Soaking Hands, Yardmen.	42/-						
Bottlers, Corkers...	36/-						
Packers, Loaders ...	40/-						
Malthouse Hands...	40/-						
Wirers	......	36/- per week.					
Bottle-washers ...	......	42/-					
Head Storemen, Storekeepers, and Head Cellarmen.	42/-	60/- „					
Storemen and Cellarmen.	42/-	45/- „					
Boys	10/-	12/5 per week and 2/6 rise every six months.					
Draymen	43/- to 46/-	45/- to 55/- per week.		(*c*) 43/- and 46/-	54		58
Grooms	40/-	42/- and 50/- per week.		40/- per wk.	57		58
Wire-netting Workers..	48/-	54/-	Disputed; piecework proposed.	(*c*) Time-work 1s. per hour; piecework as per specified scale.	48	Disputed; piecework proposed.	(*c*) 8 hours per day.
Undertakers—							
Shopmen	......	50/-	47/6	47/6	54	55	51
Yard and Coachmen	......	45/-	45/-	45/-	60	66	60
Electrical Employees—							
Electrical Mechanics.	......	10/- a day.	Disputed.	......	8 hours per day.	Admitted.	8 hours per day.
Electrical Fitters...	......	10/- „	10/- a day.	10/- a day.			
Armature Winders.	......	10/- „	Disputed.	8/- „			
Wiremen	......	10/- „	Disputed.	9/- „			
Tailoresses—							
Tailoresses	......	20/-	20/-	20/-	48	48	48
Coat Machinists ...	......	25/-	25/-	22/6 and 25/-			
Tobacco Workers—							
Plug Coverers ...	......	American leaf, present prices; Colonial work to be increased ½d. per lb.	Objected to.	American leaf, present prices; Colonial leaf, an increase of ½d. per lb. all round.	48	48	48

were not made Common Rules—*continued.*

Apprentices.			Overtime.	Preference.	Remarks.	Industry and Class of Employee.
Claim.	Answer.	Award.				
3 to every 100 men or fraction thereof	Disputed.	(*b*) 4 to every 100 men or fraction thereof.	(*b*) Before or after hours, at ordinary rates. (*c*) Time and a quarter.	Agreed to.	Award made by consent.	Brewery Employees— Tower, Mill, and Tun-room Hands. Cask Washing or Soaking Hands, Yardmen. Bottlers, Corkers. Packers, Loaders. Malthouse Hands. Wirers. Bottle-washers. Head Storemen, Storekeepers, and Head Cellarmen. Storemen and Cellarmen. Boys. Draymen. Grooms
....	......	......	....	Agreed to.	(*c*) Award by consent.	Wire-netting Workers.
....	....	....	Coachmen or Yardmen, 9d. per hour; Shopmen, 1/-. Sundays, Good Friday, Christmas Day, and annual picnic day, double time.	Agreed to.	Award by consent.	Undertakers— Shopmen. Yard and Coachmen
to every 2 journeymen	Disputed.	1 to every 2 journeymen	First 2 hours, time and a quarter; time and a half thereafter. Sundays, time and a half if not part of employee's week's work. Holidays, time and a half.	Claimed: opposed.	....	Electrical Employees— Electrical Mechanics. Electrical Fitters. Armature Winders. Wiremen.
to each tailoress.	2 to each tailoress.	2 to each tailoress.	Time and a half.	......	Award by consent, with the exception of a few items in the piece-work log, disputed.	Tailoresses— Tailoresses. Coat Machinists.
....	......	......	....	Claimed; opposed.	....	Tobacco Workers— Plug Coverers.

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